<110> Sun, Yongming
        Recipon, Herve
        Ghosh, Malavika
        Liu, Chenghua

<120> Compositions and Methods Relating to Colon Specific
        Genes and Proteins

<130> DEX-0255

<140>
<141>

<150> 60/244,758
<151> 2000-10-31

<160> 176

<170> PatentIn Ver. 2.1

<210> 1
<211> 108
<212> DNA
<213> Homo sapiens

<400> 1
aatctcctta gatgctacta catgacattg attggcatct gatgtctatc tgattatcag 60
gaatttacag tttcagtttc caaagaacta tatgaaaaaa ctattata   108

<210> 2
<211> 295
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (88)
<223> a, c, g or t

<220>
<221> unsure
<222> (128)
<223> a, c, g or t

<220>

<221> unsure
<222> (134)
<223> a, c, g or t

<220>
<221> unsure
<222> (171)
<223> a, c, g or t

<220>
<221> unsure
<222> (177)
<223> a, c, g or t

<220>
<221> unsure
<222> (186)
<223> a, c, g or t

<220>
<221> unsure
<222> (189)
<223> a, c, g or t

<220>
<221> unsure
<222> (195)
<223> a, c, g or t

<220>
<221> unsure
<222> (227)
<223> a, c, g or t

<220>
<221> unsure
<222> (248)
<223> a, c, g or t

<220>
<221> unsure
<222> (255)
<223> a, c, g or t

<220>
<221> unsure
<222> (290)
<223> a, c, g or t

<400> 2
ttcattccat atgtgagcat gcttaagctc cctggaagaa ccatctgaaa tgtagtaaaa 60
caattaatga gaaaagaaca ggattganat tagctgtagg atagctcaga ggaaagaaga 120
ctcactantt cagnatgtac gagtactagc taaagtaagc agagaagaac ncacttnatc 180
ttcttnganc actgngnctt tttactggtc ccttacccct accctgnata gttacattgg 240
cctctctngg tggantaatt tcccttaaga aaacagaagc tattttaacn aagcc   295

<210> 3
<211> 153
<212> DNA
<213> Homo sapiens

<400> 3
aagaaaatga aaaggcaagt aaaagttggg aaaagtatta ataataaata tgtccagtaa 60
aggacttgca tgcaaaacac ataatgaact tctacaataa tagagagaca gacaactcaa 120
aaataggcaa aagttttaag tgtacatgaa gcg   153

<210> 4
<211> 236
<212> DNA
<213> Homo sapiens

<400> 4
gaaagatgct ttatgaatct ttatatgaat cttccttctg ctgttaggtt tagtagagca 60
accccctaa tatcactatt tctggcgctt tgattagttg cttgttggaa ttgtcaaaat 120
atctaaaaat tttaataaaa tagaacctta aagggagaaa aatcacaccg tgagcccaag 180
agaactccaa acactcacca acatggggac caaggcacct gattattatg tattga   236

<210> 5
<211> 719
<212> DNA
<213> Homo sapiens

<400> 5
gcaacaacct gagggaactg atttataatc agttgctaag gtggaaaact tgactttaat 60
aatgtatatg cagaaagaaa tgctttgctt agttgctttc tgcttatctt taagactttc 120
acactcttct tgtttttttg ttgtcattat taatataccg ttttgaaata cagaaggtct 180
aaattactaa cactacagat agcagttgtg gcaaataaaa ataagacaga gtgaaactct 240
taatcacata gctgttttct gagatttaaa ttgccactgt cactgttgag tctgatttta 300
aaatggtttc agcagttctc tctacttctc tctttccatc cttgctcttt attaaacagt 360
atttgatgcc tataatatga taaccccttca acttaatttt tggaagggta cagaacaaat 420
gaggaaatct ttgtttgtaa tgtataaccc atttgttacc tgcaactgaa agacaatgaa 480
attgattatt atccaggcat gactgtggct tatttaaatc agatactttc tcttttcagc 540
tgctgaagat acttgcaatc acctgtggct tttgtattgg tagatacatc caagaaaata 600

3

```
ttgacttgaa aaaaattgtg cttagagccc tgatctggac attttaaatt cacttaaatt 660
gttttaaaaa ttgtgatata ttaatgaaat ttttattttc taactaatta tgaacctttt 719


<210> 6
<211> 687
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (185)..(330)
<223> a, c, g or t

<400> 6
gtccaaatta ccacccactc ctgagggacc caggggacca gaagtcctcg tcagtccatc 60
acagcccatt ctgcccctct gctgtcctca ccagcctcgt ggagacccaa aatggtcttc 120
ttctaggaga ggctaggggg aagggcagag gagctaggtt actagcacag agctcaagcc 180
tgatnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 240
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 300
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nggagatgga gtttataagg cacccagacc 360
agtgctggat gtccaactca acttggcaat gacgggggac acatctcctt gtttattttt 420
atgtttattt attttttttt aatggagtct tgctctggtt gcactccagc ctgggtgaca 480
cgacgtgaga ctctgtctca aaaacagact taaacccctt taaaagtgtg tgataaacat 540
cagcttgaca aatatgaacc cagcacccgt gaagcactgg cactatgctg ggtgctgagg 600
gagatggcat gaacagaaaa gagagacaca ggcccaagga gggaagtcca gtgtttggtg 660
ggagatgggg atgttaacaa tcacaca 687


<210> 7
<211> 475
<212> DNA
<213> Homo sapiens

<400> 7
ttttggtgag ccagccagga gtgaagacga caggtttgct gtctcctttg cctgtgggtc 60
tggggcccca gcctggggga gacccgtgac tccaggcatg ctatcaggac aacttcaacc 120
cgaggggaga tcagctctcc cgcaacctgg tgccgctctc tgacagcaca acagaaccta 180
aggggctaca ggatgattca aggaacagtg tgctacagga cctcggtatt cctgctgaga 240
gtcatttcct gtgctggatt taccatcaca gggaccagat ttatagaaaa atgaacatgt 300
attgttgcta aatggagttg gtcatggagt ggaaactaac aatatgttca cctaaatgtg 360
ctacaaccac tcaaggtctg caaacagatt cctatttaga tgttgttgag agctgaattt 420
ctggaacaag agatatagat taagactgtt gttacatgtt gcctacatga ctttc 475


<210> 8
<211> 521
<212> DNA
```

4

<213> Homo sapiens

<400> 8
```
ttttggtgag ccagccagga gtgaagacga caggtttgct gtctcctttg cctgtgggtc 60
tggggcccca gcctggggga gacccgtgac tccaggcatg ctatcaggac aacttcaacc 120
cgaggggaga tcagctctcc cgcaacctgg tgccgctctc tgacagcaca acagaaccta 180
aggggctaca ggatgattca aggaacagtg tgctacagga cctcggtatt cctgctgaga 240
gtcatttcct gtgctggatt taccatcaca gggaccagat ttatagaaaa atgaacatgt 300
attgttgcta aatggagttg gtcatggagt ggaaactaac aatatgttca cctaaatgtg 360
ctacaaccac tcaaggtctg caaacagatt cctatttaga tgttgttgag agctgaattt 420
ctggaacaag agatatagat taagactgtt gttacatgtt gcctacatga cttttcaaaa 480
gcttgattcc cagtggcgct ctcaacagca gtcataaaac a 521
```


<210> 9
<211> 743
<212> DNA
<213> Homo sapiens

<400> 9
```
gaaatttatg aggctacaag aatggtgaaa tgagatcagt cagtcaagtg tggaggaaag 60
taattacggc tggaaaagat ttaaactatt agaatagaga agactggatt agagaatatt 120
aatattctag aaaataacaa gcttatgaca ggaatactat atcagagtca agagaaaaca 180
aaagtatagg taaagactga atttatcata gcccaagaca aggagcagga actgacattt 240
agtcaacagt atttattgag tccctactat gtgtgccaaa ataaaaaatt aactaagtac 300
tgggtaacag ataaagaaat gattatgaaa gctggcaaat aggaagtgag agatgaaact 360
aaagatttag ttttacttgc acactgacct tgcaatttcc ccaatgtaat tttgtctgat 420
ctgagttgtg gcaagatatc ctgttttttg tacttacagg tattcctgct gagagtcatt 480
tcctgtgctg gatttaccat cacaggggacc agatttatag aaaaatgaac atgtattgtt 540
gctaaatgga gttggtcatg gagtggaaac taacaatatg ttcacctgta gttttttaag 600
tgctgtgcca agaaagcctc tttggaggcc attgccataa tctactgttt acatttgtgc 660
atttagtttc cgggaaatat tttttaaacc tatcctagga gctattcaga accatagagg 720
ctatttcagt tcccctatcg act 743
```


<210> 10
<211> 548
<212> DNA
<213> Homo sapiens

<400> 10
```
atgtaaaggc ttaaatcagc acctggacta catatataag gtgatcaata aatatctact 60
ttggtatctg aatgcttcaa gatagccttt tgttcccttc taaaaaagag tgggtagtga 120
ttgttaagac ttacccgctc ataaatgttt tattacatac ttaatatgtg aagctatcaa 180
gtaaggaggt aaggaagtat gttaataggg aagaagatga taaaataccc aaataggaaa 240
ccataatgcc aactttctaa gcttaagctg actgtaacaa gaactggct ttgtaacaaa 300
gaacaagtct tactggcttc atgcaatgca aacatttttt tcttacgtat ctgacagatc 360
aaggtggtca ggtagctctc ctgagcagtt ttccaccatg tggtgattca gggatccaag 420
```

5

cacattctat cacgaggctt agccatattg gagttttttca cttcggtgat gaggatgagg 480
gagaaagtgg gagagagtga aaagagggag aaaggtggaa aagggagaaa gaaggagaag 540
gtggaaag 548

<210> 11
<211> 797
<212> DNA
<213> Homo sapiens

<400> 11
actggcttag cacttacttc ttggtgtgaa gagctagttc ttccctagag agcccaaact 60
ctggagccag gtggattgag tgggaatcct agctctgcta aagggacgta cttgcctaag 120
tctcctcctc agtaaatagg atactagtga taacatcttc atagagttgt catgagaatt 180
aaatgaataa tatatgtaaa ggcttaaatc agcacctgga ctacatatat aaggtgatca 240
ataaatatct actttggtat ctgaatgctt caagatagcc ttttgttccc ttctaaaaaa 300
gagtgggtag tgattgttaa gacttacccg ctcataaatg ttttattaca tacttaatat 360
gtgaagctat caagtaagga ggtaaggaag tatgttaata gggaagaaga tgataaaata 420
cccaaatagg aaaccataat gccaactttc taagcttaag ctgactgtaa caaagaactg 480
gctttgtaac aaagaacaag tcttactggc ttcatgcaat gcaaacattt ttttcttacg 540
tatctgacag atcaaggtgg tcaggtagct ctcctgagca gttttccacc atgtggtgat 600
tcagggatcc aagcacattc tatcacgagg cttagccata ttggagtttt tcacttcggt 660
gatgaggatg agggagaaag tgggagagag tgaaaagagg gagaaaggtg gaaaagggag 720
aaagaaggag aaggtggaaa ggagagagag agaaattgag aaagtgagaa aaaaaaaaa 780
aaaaaacaaa aaaaaaa 797

<210> 12
<211> 558
<212> DNA
<213> Homo sapiens

<400> 12
ccatatcttg tttttgacca gtgaagggga aagaaagaaa gtaattctag aacaacctac 60
tacttacttt agagcttcac ttttatatca tctatatttg acttggaaac catctgtgtt 120
tttgtctttg tggtcagcca ttattgtttg ttttgccatg atatatgtcg gaatgatatt 180
atttgactct cctttaagta cctcctgctt ctttgagtaa ggagatccta ccagtatcta 240
acagaaaatc ttgagcttgc agaataacag aaaagaaaaa aaaaacaaaa acacaacttg 300
ccaaaacact gaaactccct ctacttatga aataaacaaa ctggcttaaa ttgggtggaa 360
tcattatggc caaatggtgt ttgggcagaa tcaccttgct gaggtcaccg tctgaatttt 420
cactgcctgt ttcatcacaa ctcccctca gtttgcccat gacatccatg aggaggcaat 480
gagcttgaga gtaacgtttc agtataaaat ggctttctct taaaaacctg atgtcatagt 540
atgggctact agcacttc 558

<210> 13
<211> 596
<212> DNA

6

<213> Homo sapiens

<400> 13
aaagatgaca tggattagct tcaagtaaca cataatgtgg ctggagtcag ctgatcttta 60
tgctgaaagt gtcaacagta gtgacaaata cttcaagtaa cgggtcaaaa gtctaagaca 120
gtcattctgc cagaaatggt ctgggacttc cccatacatg ggacacgtag atcaactttc 180
tccaagaacc accaacctgg catgcagtga tgacctctgc agtagacagg gatttaggct 240
tgattgttgt tcatctcttt ggagacataa ccctaattgt gaacttctaa attaatggcc 300
tgacaattag atcagcagct aagataaatt tcagtttgca gccccaaaga agatgttctt 360
aattagacag ttaatcattt tcaatatgga agcctaaaca cgtagaatgt ggcaataacc 420
cggaactctc agttctgaca attgagtgaa gtaatcaccc cagattcagg ttcttcattg 480
gctgacaatg agatcaaaca cccacaccag cccagtgaac accatgaggt gtcatcttcc 540
tggcccatta gtgaaccagg aacagatatt tagaaaatat tcagtaaatt ggggag 596

<210> 14
<211> 1114
<212> DNA
<213> Homo sapiens

<400> 14
gtagacattt aagtttttaaa tcctgtaaag agaagcagca gagatgcaac ataggctcag 60
actttaagca gctctaattt catggctttc ctgggcctcc accatattgc cataggggcct 120
gtcacatgct tatgcatcct actggctgca gcagtgcatc ctgaagacag ctcagtatag 180
ccatgggcta cttttctagt catgggctgt ggaacctgga acatgtgacc agaataccac 240
tgaccctgtg gaccagcaag cctaagttaa aggcagccat catgaggatg aaaaggagac 300
cctcaccagc cagaaggggga tgtatggggt aagcagaacc ctattagaga gaaaagccaa 360
caggaatgac tgggaaaaca gcaggagggg acaaaaattg gtgtgccttg gtgacacaaa 420
aaactctggg atgacggagt tgatgacaat cgaggccaaa atcatcttca acatacccta 480
gttctaaagt atgcactatt ctccccctca gcacagccct ttgggccttt tacacaatgg 540
tgacttctaa tttggtccct actcagattt tagaactccc aagtaatgtt cccaaatgga 600
tcatattcac gaggagtagt accagtgaat taactgggtc tcaaaataca attgcacatt 660
tcagacactg ctttaaagtt gtgtcctctc attttctcat tcctgttcag ttataatagg 720
cagtcttcct cttattcacc aggggattcc atccctctga ttcaggacca tggtatatgg 780
aatcgccctg ccttctcatc ttcagcctct cgctgtacag gatccatcct cttagcactt 840
tttttcctct tagtaaacta ttgctgtgta acacagagaa atactcatag ctctgatcac 900
aaatctgagt cagatgcctc ttgaagaatg gacttctgag gagcaccgta ctcgccccag 960
cacagctctc acacaggagt ttgctgaaag tctcctgcct gtgtgcctcc cagtatgagc 1020
tctgtgaggg ccgtaacccc agggtataag taactcaact agaatatgtg caatacactt 1080
ctctgtgtcc tgatgttaaa cttaaaatga aata 1114

<210> 15
<211> 1185
<212> DNA
<213> Homo sapiens

<400> 15

```
gtagacattt aagttttaaa tcctgtaaag agaagcagca gagatgcaac ataggctcag 60
actttaagca gctctaattt catggctttc ctgggcctcc accatattgc cataggcct 120
gtcacatgct tatgcatcct actggctgca gcagtgcatc ctgaagacag ctcagtatag 180
ccatgggcta cttttctagt catgggctgt ggaacctgga acatgtgacc agaataccac 240
tgaccctgtg gaccagcaag cctaagttaa aggcagccat catgaggatg aaaaggagac 300
cctcaccagc cagaagggga tgtatggggt aagcagaacc ctattagaga gaaaagccaa 360
caggaatgac tgggaaaaca gcaggagggg acaaaaattg gtgtgccttg gtgacacaaa 420
aaactctggg atgacggagt tgatgacaat cgaggccaaa atcatcttca acatacccta 480
gttctaaagt atgcactatt ctccccctca gcacagccct ttgggccttt tacacaatgg 540
tgacttctaa tttggtccct actcagattt tagaactccc aagtaatgtt cccaaatgga 600
tcatattcac gaggagtagt accagtgaat taactgggtc tcaaaataca attgcacatt 660
tcagacactg cttttaaagtt gtgtcctctc attttctcat tcctgttcag ttataatagg 720
cagtcttcct cttattcacc aggggattcc atccctctga ttcaggacca tggtatatgg 780
aatcgccctg ccttctcatc ttcagcctct cgctgtacag gatccatcct cttagcactt 840
ttttttcctct tagtaaacta ttgctgtgta acacagagaa atactcatag ctctgatcac 900
aaatctgagt cagatgcctc ttgaagaatg gacttctgag gagcaccgta ctcgccccag 960
cacagctctc acacaggagt ttgctgaaag tctcctgcct gtgtgcctcc cagtatgagc 1020
tctgtgaggg ccgtaacccc agggtataag taactcaact agaatatgtg caatacactt 1080
ctctgtgtcc tgatgttaaa cttaaaatga aatagttttc agaataaaaa taaatttgta 1140
tatattaaaa aaacaaaaaa aaaaagatc tttaattaag cggac            1185
```

<210> 16
<211> 413
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (138)
<223> a, c, g or t

<220>
<221> unsure
<222> (145)
<223> a, c, g or t

<220>
<221> unsure
<222> (151)
<223> a, c, g or t

<400> 16
```
acaaaatgtt tttatgtgtt taggtctgac ggtatgtctt cttattgttg actttttaaat 60
ttattaaatt gtagtttagg agaatgagct aatataatct ctaatagctt agaataattg 120
aagtaatttta ttattttnat ttatnattat naccattatt attaacaact ttgtgaacaa 180
aagcatttat ttaaatgttt tatggttatt tgtattctct atttgtagga ttcaaagttt 240
tatattcaac ttattgagat tattatagaa atgaggtata tttgagaggg tcaaatattc 300
```

```
taaaagaata tttcagacac cacctcctcc agcaacaaaa atagctacaa accaatataa 360
attcatgtta gttatttttca tacatattga aaactttact gtacattaaa agg          413
```

<210> 17
<211> 517
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (138)
<223> a, c, g or t

<220>
<221> unsure
<222> (145)
<223> a, c, g or t

<220>
<221> unsure
<222> (151)
<223> a, c, g or t

<400> 17
```
acaaaatgtt tttatgtgtt taggtctgac ggtatgtctt cttattgttg acttttaaat 60
ttattaaatt gtagtttagg agaatgagct aatataatct ctaatagctt agaataattg 120
aagtaattta ttatttttnat ttatnattat naccattatt attaacaact ttgtgaacaa 180
aagcatttat ttaaatgttt tatggttatt tgtattctct atttgtagga ttcaaagttt 240
tatattcaac ttattgagat tattatagaa atgaggtata tttgagaggg tcaaatattc 300
taaaagaata tttcagacac cacctcctcc agcaacaaaa atagctacaa accaatataa 360
atttcatgtt agttatttttc atacatattg aaaactttac tgtacattaa aaggttgtac 420
agacagccct ccatatctgt gggtttcaca tccatgtatt caaccaagca tggatcaaaa 480
atattcagta aaaaaaaagt cgacgcggcc gcgaatt                           517
```

<210> 18
<211> 502
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (292)
<223> a, c, g or t

<400> 18
```
cacacagaat gcacaaaggc agggctgctc ttttatttttg ggtggcgtgg gtggaagtag 60
```

9

```
gcaatggagg cacagttgtc aaagccactg gtctaatcta actattcttc tctcttccac 120
tttacagagg gtgtaacttg ggccaagaaa tcgtgatgtg agtaggtcac acagtgttga 180
gggccaaaac cctcgactcc gttgggagtt aaaggggagg aagtggacat ttcctttgaa 240
cctaataata agcaggtgag gttttgtatt ctcatttttc acagtgcaag anaattttgt 300
ttagaaattc tagttaagtc atttacccaa agccctaaag ccagtaaaca gcaagtggga 360
atcaaaccca agtcccttga catgccaaac cagcttcttt ccactagacc accccttccc 420
ccattactgt aaactccatc tctccgctgc tgtcagctcc ttcttgatcc gtacagaaat 480
aaaagtttgc caccaaaaaa aa                                          502


<210> 19
<211> 2961
<212> DNA
<213> Homo sapiens

<400> 19
cctgctgctc ctgggagggg ctcaggccat ttgattctgc ctggtgggtt cagggctgcc 60
tggctagcca ccaagacacg ggagagcaaa gcccggccaa acccaggggc agtggtgtcc 120
agcaggcatc aggacatgcc gtggcccaca catgcccttc tccacaggtg ccatcatctc 180
ctttcttctc ctgttagtga tggcttcatt ggcctcaggt gacaccgcct ctagcccag 240
gccactggat ccagccagag cgtctgtgca tcgccccagg gaggtgtggg gaggctcggc 300
cccacctggc aagtttatag gctgcttgag gacataagat gggtacagaa gaggcttcag 360
ggctcagcag atgttgtgct gggagtgagc ccaggcaagg tggcccatgg acagaagatg 420
gaaggtcagt cgtggcctcc ttccagaagg aaagagattt tagcaggaag agacaggcaa 480
ggaaaggaat tggttttca ggcagagcgg tacttttta aattgacaaa ttttaagcat 540
acagaaaagt agagaggacg aacctccaaa catcagccct tagattccag tacatcctgc 600
cttggtagct gacgtcacga acgctgtgac ctgtccctct gcactccatc atagcatctc 660
taaaacggag gacatttcct acctcagcac aacttcatta tcacaaaaga gaacattttg 720
agcaaaagtt tggaagcagg caaaagtatg gtttgttctg gaatggcatg aatgaatgag 780
tcatgggctg gacccggccc cgcagaaaga gcagaggagg ccgtctctgg tgtaggagtt 840
gaagccaaga ctcagcatgc aggacaagga gcccagcctg gtggcatggg ctgtggcttc 900
tccagtgggc ccataggaat ggccctgggg ctgggacttg tggggacggc ggccacaaga 960
ggaggatctt cagcatggcc tgacagcacc tgtaatgtag gcaggcaatg ggctcctcca 1020
ggtggcagga acaccgtgag gagcatgcaa cgtgctggag accatggggc atgtgacctc 1080
cgggcacacc ctggacagac ctgggtgaga ggtgggctgg gacgccagga cagtgaaggg 1140
cttcaaggtg tgtttgtcct ttgtccttat acaggtgacc tgcatgggcg ggtgaggtcc 1200
atcagaatgc tctagaacag gacaactgag gtcccggctg ccccgctcaa cacgccatga 1260
ttcctagact gccctgagag gtcaggtttt aaatagggtg tggcccggca aggaccctga 1320
gggatgtgag gccagacagc tccttggtgg ccgcctgcac gggaagctga gtggccccttt 1380
ggaacaggaa gtgccttgtc caagttaacc cgggcccggg cccaccttgg actccctctg 1440
gagagaacgg ctggcctgtt cgcctccttt ctccttcctt ccaaaataac atgtccaggt 1500
cccttggtaa gaatgctgca gctggggtca gtctccaaac tggagtttgg tggctaaaat 1560
gcccgccttt ctgcccccaa tttcacacat ggatgatggt cctggttcag cagggaagat 1620
tctcttggac ccgtgtctgc tggttgggaa gtggagaaag ccgccctgtt ctgcctccat 1680
tttgaaacgt ctttctgtt cggaggacta aaggaagcca gagctggttc agatgttcat 1740
gagcacctgt gccagcccct gcccgtcaca cttgaggaca ccaaggctgt ggtctgtgca 1800
gtgaatcggg gcagtggggg gacttcatgg ttagaaacac aagctggagg ccggatgcgg 1860
tggctcatgc ctgtaatccc tgcactttgg gatgcctgag gtcaggagtt caagaccagc 1920
```

10

```
ctggccagca tggtgaaacc ctgtctctac taaaaataca aaataaaaat taactgggtg 1980
tgtggcaggc acctgtaatc ccagctactt gggaggctga ggcaggaaaa tcacttgaac 2040
ccgggaggtg gaggttgcag tgagctgaga tcgcaccatt gcactccagc ctgggcaaca 2100
agagtgaacc tccgtctcaa aaacaaaaca aaacaaaaag tagattctaa ttcaggaggt 2160
tcggagtgtg tgcatttcta atgcgctcca aggtgctgtt gctgctgctt agaaccatca 2220
tttcagtagt aagggtctaa aacaacacga ctcacaagac ctcaacccac cagcccaggt 2280
ggaaaccaat tcacaaacgt ctcagtgaaa tgattctgtt gatgctggtg cgcacttcta 2340
catttatgtg gggaaggagg tcaggacaga agttgaggga cttgggaccc caaagcagat 2400
aaggttgtgg ggtgcagatc ttgctctagg atcctgaagc gagtctctgg aggaggtcag 2460
gcaaaatggt ggcaaacttt tatttctgta cggatcaaga aggagctgac agcagcggag 2520
agatggagtt tacagtaatg ggggaagggg tggtctagtg gaaagaagct ggtttggcat 2580
gtcaagggac ttgggtttga ttcccacttg ctgtttactg gctttagggc tttgggtaaa 2640
tgacttaact agaatttcta aacaaaattt tcttgcactg tgaaaaatga gaatacaaaa 2700
cctcacctgc ttattattag gttcaaagga aatgtccact tcctcccctt taactcccaa 2760
cggagtcgag ggttttggcc ctcaacactg tgtgacctac tcacatcacg atttcttggc 2820
ccaagttaca ccctctgtaa agtggaagag agaagaatag ttagattaga ccagtggctt 2880
tgacaactgt gcctccattg cctacttcca cccacgccac ccaaaataaa agagcagccc 2940
tgcctttgtg cattctgtgt g                                          2961


<210> 20
<211> 653
<212> DNA
<213> Homo sapiens

<400> 20
gtagaacaga aagcctccct gctcactggc ctttcccctt ccctcactgg ctgcccatgg 60
agccaggatc agcatgggaa caatcaagga ggcagggggt tatcagtact atggacccct 120
acactggctc tgcctggtgg ttcttctctt cgcataccaa agacagaaat taagcctcca 180
agagtggtaa ctgacctcgg tcacacttgg tgggtgtggg aaaggattca aatgtaggtc 240
tgttctcttc ttcatctatc atggtccctg tcctggaggc aagtcgtctg gggctcagaa 300
aacacccctg ttgccactga ttggaattcc aagggtctgg gtgaagtggg gatgggcctc 360
cagcttgcct ccagcctgaa aaaatagtag agggtgttga ggctgggaag ggaggtgggg 420
ctcatgttgt acagggcctg agccagggag cttgggcttc attctgagta ctgtggcagc 480
cctgggaagg tttgtagcac agagggatat tgtcattttt ggaaagatcc ctttggctgc 540
ttaggtagag aagggcttca agagggcagg aagggacagg actacagaag gggctgcttc 600
agagtccaga ttaaggaagg agaggcctgg gcagtcagaa aggaagagaa gcc         653


<210> 21
<211> 765
<212> DNA
<213> Homo sapiens

<400> 21
gaacagaaag cctccctgct cactggcctt tcccttccc tcactggctg cccatggagc 60
caggatcagc atgggaacaa tcaaggaggc aggggcttat cagtactatg gacccctaca 120
ctggctctgc ctggtggttc ttctcttcgc ataccaaaga cagaaattaa gcctccaaga 180
```

11

```
gtggtaactg acctcggtca cacttggtgg gtgtgggaaa ggattcaaat gtaggtctgt 240
tctcttcttc atctatcatg gtccctgtcc tggaggcaag tcgtctgggg ctcagaaaac 300
acccctgttg ccactgattg gaattccaag ggtctgggtg aagtggggat gggcctccag 360
cttgcctcca gcctgaaaaa atagtagagg gtgttgaggc tgggaaggga ggtggggctc 420
atgttgtaca gggcctgagc cagggagctt gggcttcatt ctgagtactg tggcagccct 480
gggaaggttt gtagcacaga gggatattgt catttttgga aagatccctt tggctgctta 540
ggtagagaag ggcttcaaga gggcaggaag ggacaggact acagaagggg ctgcttcaga 600
gtccagatta aggaaggaga ggcctgggca gtcagaaagg aagagaagcc ggatgtggtg 660
gcttgtatct tcaatcccag cacttttgag aggccaaggt ggggaggatc actttgagcc 720
caggagtttc aaaacccagt tttggcaaca tagttagact gcttg              765


<210> 22
<211> 148
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (9)
<223> a, c, g or t

<400> 22
ctcggaatnc ggctcgagga gaatttttgg agatccttag tctgctattc ttactgacat 60
tagccttatg ttgttgatag tagtatagaa tagtattcga aatgatgtgg acaattttgt 120
caaatgcttt taagatattg tacatctg                                148


<210> 23
<211> 398
<212> DNA
<213> Homo sapiens

<400> 23
ctctggacca attattgatt tgcaagttcc tgtgaaatgt tttatcaccc agtgtgtttt 60
gtctgtgtac aggaagcact ggatacactg gctaggtgtg tgcttttaag taacattctt 120
ctctgattcc tttccttcaa agtgggagat actggtagca tctacctacc ctgcaaggat 180
ttaatgagtt ttaatgacat gagaaatgct tagatttcag ggatttgact aaacccaaat 240
acctgggcca tatttttagc caggagccag ggaatatttg cactaagcca ctggctgacc 300
caaaacttct ctctttaagt catttagcca aacagcaaat tagggagcca gcagctcatt 360
ttgggggtga tgttttgtat gagaagttgg tgaacctg                     398


<210> 24
<211> 523
<212> DNA
<213> Homo sapiens


                              12
```

<400> 24

```
tacaactttta gttttttgtgc tacttaggag agaaaagcag atattgcctt attttgtgtg 60
ccctatccat ttaattagaa gctcaatgaa aattttttatc attatattat cacctctatg 120
tggaatattg ttaaatgttt tagaaagttt gaaattcatt tttaaatgtg aatcattatt 180
gtttgtgtgg ggggaggaat gtcaagttgg aattatgaat caggctttgc cttaccaagt 240
acttttatat taatagggat tattttgaat ttctgtaata cgtatgtatc ctctataata 300
catagagaat gcaaaaggaa aataatttga aagctatcct attttatctt gaaagcaatc 360
ttttaaaagc gcattataca tttatttgaa cgcttatttg gaattgtctc ttttccattc 420
tcttttcctt taaagaaatg gtaggggaaa aacatctggt atacccctata gctgtcttac 480
tgtagtcaag gtaatatact acgaaagaac acacgtaccc tgg          523
```


<210> 25
<211> 5982
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (5780)
<223> a, c, g or t

<220>
<221> unsure
<222> (5885)
<223> a, c, g or t

<400> 25

```
atgggcccgc gagccaggcc ggcgcttctc ctcctgatgc ttttgcagac cgcggtcctg 60
cagggcgct tgctgcgtga gtccgagggc tgcgggcgaa ctaggggcgc ggcgggggtg 120
gaaaaatcga aactagcttt ttctttgcgc ttgggagttt gctaactttg gaggacctgc 180
tcaacccotat ccgcaagccc ctctccctac tttctgcgtc cagaccccgt gagggagtgc 240
ctaccactga actgcagata ggggtccctc gccccaggac ctgccccctc ccccggctgt 300
cccggctctg cggagtgact tttggaaccg cccactccct tcccccaact agaatgcttt 360
taaataaatc tcgtagttcc tcacttgagc tgagctaagc ctggggctcc ttgaacctgg 420
aactcgggtt tatttccaat gtcagctgtg cagttttttc cccagtcatc tccaaacagg 480
aagttcttcc ctgagtgctt gccgagaagg ctgagcaaac ccacagcagg atccgcacgg 540
ggtttccacc tcagaacgaa tgcgttgggc ggtggggggcg cgaaagagtg gcgttgggga 600
tctgaattct tcaccattcc acccactttt ggtgagacct ggggtggagg tctctagggt 660
gggaggctcc tgagagaggc ctacctcggg cctttcccca ctcttggcaa ttgttctttt 720
gcctggaaaa ttaagtatat gttagttttg aacgtttgaa ctgaacaatt ctctttttcgg 780
ctaggcttta ttgatttgca atgtgctgtg taattaagag gcctctctac aaagtactga 840
taatgaacat gtaagcaatg cactcacttc taagttacat tcatatctga tcttatttga 900
ttttcactag gcatagggag gtaggagcta ataatacgtt tattttacta gaagttaact 960
ggaattcaga ttatataact cttttcaggt tacaaagaac ataaataatc tggttttctg 1020
atgttatttc aagtactaca gctgcttcta atcttagttg acagtgattt tgccctgtag 1080
tgtagcacag tgttctgtgg gtcacacgcc ggcctcagca cagcactttg agttttggta 1140
ctacgtgtat ccacatttta cacatgacaa gaatgaggca tggcacggcc tgcttcctgg 1200
```

13

```
caaatttatt caatggtaca ctgggctttg gtggcagagc tcatgtctcc acttcatagc 1260
tatgattctt aaacatcaca ctgcattaga ggttgaataa taaaatttca tgttgagcag 1320
aaatattcat tgtttacaag tgtaaatgag tcccagccat gtgttgcact gttcaagccc 1380
caagggagag agcagggaaa caagtctttta cccttgata ttttgcattc tagtgggaga 1440
gatgacaata agcaaatgag cagaaagata tacaacatca ggaaatcatg ggtgttgtga 1500
gaagcagaga agtcagggca agtcactctg gggctgacac ttgagcagag acatgaagga 1560
aataagaatg atattgactg ggagcagtat ttcccaggca aactgagtgg gcctggcaag 1620
ttggattaaa aagcgggttt tctcagcact actcatgtgt gtgtgtgtgg ggggggggg 1680
cggcgtgggg gtgggaaggg ggactaccat ctgcatgtag gatgtctagc agtatcctgt 1740
cctccctact cactaggtgc taggagcact cccccagtct tgacaaccaa aaatgtctct 1800
aaactttgcc acatgtcacc tagtagacaa actcctggtt aagaagctcg ggttgaaaaa 1860
aataaacaag tagtgctggg gagtagaggc caagaagtag gtaatgggct cagaagagga 1920
gccacaaaca aggttgtgca ggcgcctgta ggctgtggtg tgaattctag ccaaggagta 1980
acagtgatct gtcacaggct tttaaaagat tgctctggct gctatgtgga aagcagaatg 2040
aagggagcaa cagtaaaagc agggagccca gccaggaagc tgttacacag tccaggcaag 2100
aggtagtgga gtgggctggg tgggaacaga aaagggagtg acaaaccatt gtctcctgaa 2160
tatattctga aggaagttgc tgaaggattc tatgttgtgt gagagaaaga gaagaattgg 2220
ctgggtgtag tagctcatgc caaggaggag gccaaggaga gcagattcct gagctcagga 2280
gttcaagacc agcctgggca acacagcaaa accccttctc tacaaaaaat acaaaaatta 2340
gctgggtgtg gtggcatgca cctgtgatcc tagctactcg ggaggctgag gtggagggta 2400
ttgcttgagc ccaggaagtt gaggctgcag tgagccatga ctgtgccact gtacttcagc 2460
ctaggtgaca gagcaagacc ctgtctcccc tgaccccctg aaaaagagaa gagttaaagt 2520
tgactttgtt ctttatttta attttattgg cctgagcagt ggggtaattg gcaatgccat 2580
ttctgagatg gtgaaggcag aggaaagagc agtttggggt aaatcaagga tctgcatttg 2640
ggacatgtta agtttgagat tccagtcagg cttccaagtg gtgaggccac ataggcagtt 2700
cagtgtaaga attcaggacc aaggctgggc acggtggctc acttctgtaa tcccagcact 2760
ttggtggctg aggcaggtag atcatttgag gtcaggagtt tgagacaagc ttggccaaca 2820
tggtgaaacc ccatgtctac taaaaataca aaaattagcc tggtgtggtg gcgcacgcct 2880
atagtcccag gttttcagga ggcttaggta ggagaatccc ttgaacccag gaggtgcagg 2940
ttgcagtgag ctgagattgt gccactgcac tccagcctgg gtgatagagt gagactctgt 3000
ctcaaaaaaa aaaaaaaaaa aaaaaaaaaa aactgaagga attattcctc aggatttggg 3060
tctaatttgc cctgagcacc aactcctgag ttcaactacc atggctagac acaccttaac 3120
attttctaga atccaccagc tttagtggag tctgtctaat catgagtatt ggaataggat 3180
ctgggggcag tgaggggtg gcagccacgt gtggcagaga aaagcacaca aggaaagagc 3240
acccaggact gtcatatgga agaaagacag gactgcaact cacccttcac aaaatgagga 3300
ccagacacag ctgatggtat gagttgatgc aggtgtgtgg agcctcaaca tcctgctccc 3360
ctcctactac acatggttaa ggcctgttgc tctgtctcca ggttcacact ctctgcacta 3420
cctcttcatg ggtgcctcag agcaggacct tggtctttcc ttgtttgaag ctttgggcta 3480
cgtggatgac cagctgttcg tgttctatga tcatgagagt cgccgtgtgg agccccgaac 3540
tccatgggtt tccagtagaa tttcaagcca gatgtggctg cagctgagtc agagtctgaa 3600
agggtgggat cacatgttca ctgttgactt ctggactatt atggaaaatc acaaccacag 3660
caagggtatg tggagagggg gcctcacctt cctgaggttg tcagagcttt tcatcttttc 3720
atgcatcttg aaggaaacag ctggaagtct gaggtcttgt gggagcaggg aagagggaag 3780
gaatttgctt cctgagatca tttggtcctt ggggatggtg aaat, aggga cctattcctt 3840
tggttgcagt taacaaggct ggggattttt ccagagtccc acaccctgca ggtcatcctg 3900
ggctgtgaaa tgcaagaaga caacagtacc gagggctact ggaagtacgg gtatgatggg 3960
caggaccacc ttgaattctg ccctgacaca ctggattgga gagcagcaga acccagggcc 4020
tggcccacca agctggagtg ggaaaggcac aagattcggg ccaggcagaa cagggcctac 4080
```

14

```
ctggagaggg actgccctgc acagctgcag cagttgctgg agctggggag aggtgttttg 4140
gaccaacaag gtatggtgga aacacacttc tgcccctata ctctagtggc agagtggagg 4200
aggttgcagg gcacggaatc cctggttgga gtttcagagg tggctgaggc tgtgtgcctc 4260
tccaaattct gggaagggac tttctcaatc ctagagtctc taccttataa ttgagatgta 4320
tgagacagcc acaagtcatg ggtttaattt cttttctcca tgcatatggc tcaaagggaa 4380
gtgtctatgg cccttgcttt ttatttaacc aataatcttt tgtatattta tacctgttaa 4440
aaattcagaa atgtcaaggc cgggcacggt ggctcacccc tgtaatccca gcactttggg 4500
aggccgaggc cagcagatca cctgaggtca ggagtttgag accagcctga ccaacatggt 4560
gaaacccgtc tctaaaaaaa tacaaaaatt agctggtcac agtcatgcgc acctgtaatc 4620
ccagctactc gggaggctga ggcaggagaa ccgcttgaac ctgggaggta gaggctgcag 4680
gttagaagta cagaattcct gaagcacctt agggggtaag tcagtaggga cttaggtaag 4740
taacgtgtgg aaaagatagt ggtccattgt agagagagtg cactagaata caacttcggg 4800
tcagggaagc agcaattata ggtccaccta cagggaatga tgcagtctcc tgccttgggt 4860
aacatgttag tggcaaagct ttacagggtc caagcagggg acccacttca agagagtgac 4920
gattgcaatt aatgacacat aaaggaattg ttttttcctt atctaggtga atagggatc 4980
ttgagtaagt gtaagtaact gatgacagcc ctggcttttg tctaacagta atataacaga 5040
gtaatagcta ctactaactg agttctccta tgtgtcaagc tctgtgcaag acactttaca 5100
atgtcatttg acttaattct cccctctcag agtcagaatg atcccaaatt tcataaagga 5160
ggaaaatgag ttcacaagaa ttacattcct taaggtaaca ctggtaagtg gctcagttgg 5220
gattcaaacc cagggtacgt gtgttctttc gtagtatatt accttgacta cagtaagaca 5280
gctatagggt ataccagatg ttttttcccct accatttctt taaaggaaaa gagaatggaa 5340
aagagacaat tccaaataac tttcaaataa atgtataatg cgcttttaaa agattgcttt 5400
caagataaaa taggatagct ttcaaattat tttccttttg cattctctat gtattataga 5460
ggatacatac gtattacaga aattcaaaat aatccctatt aatataaaag tacttggtaa 5520
ggcaaagcct gattcataat tccaacttga cattcctccc cccacacaaa caataatgat 5580
tcacatttaa aaatgaattt caaactttct aaaacattta acaatattcc acatagaggt 5640
gataatataa tgataaaaat tttcattgag cttctaatta aatggatagg gcacacaaaa 5700
taaggcaata tctgcttttc tctcctaagt agcacaaaaa ctaaagttgt atagtgtact 5760
acttttggaa gagacatttn taactagtaa tgataatttg tcttaattca taaacacttc 5820
aaatcacata actgaataca ttttcaacca ggaggatgca acattacccc aaaataccga 5880
gtcanagaaa ttattattgt tgagacaacc aggtaccaaa ctcttaattc ccattgggtt 5940
tctgggcctt tttacctgta cttttaacact aattcccgtg aa                    5982
```

```
<210> 26
<211> 820
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (502)..(565)
<223> a, c, g or t

<400> 26
caaacaatat gtgtgagatt taatgatttt tgtcctattt tttttctatt tattatttaa 60
tactttcagg ggtatcctag taaaagcgac tttccatgtg cctgcctgtg cctttctgtg 120
ccagggtctt aagaaatgtg tgtgggtttc ctctgtggct ctgacactcc atcaaacacc 180
```

15

```
aggacttgtg cacgcaggtg agaagcatac ccaggtgcct cagagatatt gaagagggtc 240
tggaatgtgg gagagaggca aatggctttc caataaaagt aggctaagac ataattaggg 300
gcttaggtgc tgctttaaaa ataagtagc agtgtattcc agactcctct aagaaaagag 360
aattgctcat tgtggaacag gcatggcaat gcagtgcctt tgcctggaac accttgctgc 420
tgccatcact aagacccatt ctgggacaag aggaggctta ccccttattg agtatctgcc 480
atgagctttg tgtggtcctt gnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 540
nnnnnnnnnn nnnnnnnnnn nnnnggcca cccatttcct gacagagatt ggcctacaaa 600
ggtcagatgg cttccagggc acactgagcg gcccttgtgt gtcggaatgt tcccttctgt 660
ttgtcccttc caggctggac actttgggag cagaagtcaa agacaccttt atcattgtac 720
cctcagcacc tggtgtagtg cctgggattt agtagttctg aggagcgtgt gttgaatgaa 780
tggaggttaa gtaacttaga cattagatag taggactctg                        820
```

<210> 27
<211> 839
<212> DNA
<213> Homo sapiens

<400> 27
```
gaaatagagc acataaaacc aaacaatatg tgtgagattt aatgattttt gtcctatttt 60
ttttctattt attatttaat actttcaggg gtatcctagt aaaagcgact ttccatgtgc 120
ctgcctgtgc ctttctgtgc cagggtctta agaaatgtgt gtgggtttcc tctgtggctc 180
tgacactcca tcaaacacca gggcttgtgc acgcaggtga gaagcatacc caggtgcctc 240
agagatattg aagagggtct ggaatgtggg agagaggcaa atggctttcc aataaaagta 300
ggctaagaca taattagggg cttaggtgct gctttaaaaa ataagtagca gtgtattcca 360
gactcctcta agaaaagaga attgctcatt gtggaacagg catggcaatg cagtgccttt 420
gcctggaaca ccttgctgct gccatcacta agacccattc tgggacaaga ggaggcttac 480
cccttattga gtatctgcca tgagctttgt gtggtccttg cttgctaggt acttgagcaa 540
gcattatctt ttttaccttt taaaacacca ctgaggtgta ggtatggcac ccatttcctg 600
acagagattg gcctacaaag gtcagatggc ttccagggca cactgagcgg cccttgtgtg 660
tcggaatgtt cccttctgtt tgtcccttcc aggctggaca ctttgggagc agaagtcaaa 720
gacaccttta tcattgtacc ctcagcacct ggtgtagtgc ctgggattta gtagttctga 780
ggagcgtgtg ttgaatgaat ggaggttaag taacttagac attagatagt aggactctg 839
```

<210> 28
<211> 191
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (175)
<223> a, c, g or t

<400> 28
```
gacacttcat gttccagctt ctcgcttcaa gctcctgaag gtcagtgctt aagagcaggg 60
tcaaggagtg cagaacccat tggtgagatt tacaggaccc cccacccaac cgttagcatg 120
```

16

```
ccgtctgtag catgggaggg gcctggagca tagcagggcc tctcacgggc tttgntttca 180
ggttgacatt t                                                       191


<210> 29
<211> 998
<212> DNA
<213> Homo sapiens

<400> 29
ggccgcatat tttttttttt tttttttttt ttttaaaggt agaaaataac acaacctttt 60
attttttatt ttcatttgtt ttgagatgga gtttcactct tgtcacccag gctggagtgc 120
aatggtgtga tctcggctca ctgcaacctc cacctcccag gctcaagtga ttctcctgcc 180
ttggcctccc aagtagctgg gattacaggc atgcactaca acgcccagct aattttttgca 240
tttttagtag agatagggtt tcaccatgtt ggccaggctg gtcctcaact cctgacttca 300
ggtgatccat ccatcttggc ctcccaaagt gctgggatta caggcgtgac agctgtgccg 360
ggcccacctt ttaaatgtca acctgaaacc aaagcccgtg agaggccctg ctatgctcca 420
ggcccctccc atgctacaga cggcatgcta acggttgggt gggggggtcct gtaaatctca 480
ccaatgggtt ctgcactcct tgaccctgct cttaagcact gaccttcagg agcttgaagc 540
gagaagctgg aacaatgaag tgtctattct gcttcttctt gcaaatgctg caactacaga 600
aagacagagc aaattccaga ttgtgagcag ccacctgcat cctctatgcc tgagcggccc 660
agccatgaga gccagccgac cccacagatg atgccccttt cagcaccatc cagggccgag 720
gagctggggc aaaggcctgg atagcagtgc ctctggtttg caggtacagc agagcccagg 780
ggggtcccaa gtcagcagtc gaggttctgc aatgctcaga acacaggacc aacagacagg 840
tctgtactgc ccacccctca gttctttaca gtgaagagaa gcgctggact tcagagacac 900
ttaggaaaca aatttcagac actgctacaa cctgatgtct ctgagacatc cacaccaaaa 960
atggacaagg aagtctaggt ttccctcttt cttcatca                          998


<210> 30
<211> 282
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (5)
<223> a, c, g or t

<220>
<221> unsure
<222> (17)
<223> a, c, g or t

<220>
<221> unsure
<222> (29)
<223> a, c, g or t
```

17

<220>
<221> unsure
<222> (110)
<223> a, c, g or t

<220>
<221> unsure
<222> (128)..(217)
<223> a, c, g or t

<400> 30
accangggtc cgaccanggg tacgaccang ggtccggctt gatctcactt atatatggaa 60
cttaaaaact acacatagaa acagggtaga atggtagtta tccaggctcn ggaggaagag 120
aaaacaannn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 180
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnngta tatggaaaat ttgctgagag 240
actagatttt aggtattcta cctcaattaa aaaggtaatt gt 282

<210> 31
<211> 1225
<212> DNA
<213> Homo sapiens

<400> 31
ggggaaagac caaccagttg gggctttctc ccagggctcc cggggctgt gtctgagtgt 60
ctgtgttggc tgtttggttt gctttggttt tgtttctgga ggttgcttgc aggtttttgg 120
aggaagtgac tagtttggtt aagagctggg aactgagtca ggtaagccgt gtcatgttgt 180
aactccacca gaaaatggag gagagcgggt ttccaggaga caaagctgag atgagaagtg 240
tttataaaat tatggatgtc tccattttga agctctgttg gtgatggctg gaggaggagg 300
aggcttgctt gcctactcct tctctctttc cagagggaaa ccttgtggtg gttcctcact 360
gtctattcat tatgcaagga aatgagggct tttaagggtt cctcagattt ttctccacca 420
aagagtgctt tcacaagtta ttgaggcgtt tgtttccatt ttaaagtaaa cttttggaat 480
ttttttctc cttttgagtg gacctgaagg gttttgacct ccttcaggaa aggcaaggca 540
aaaacttaaa acagttcact gaggtctcac acaactttaa gctgctccag gtctcctgaa 600
agtcaccagg aaatgtgatt tcctccttgt gaagatggtg atggccctaa gctgagattt 660
ttttgagttc tagggtttgg ttatcatcat gttttgatgc attgcaagac tttattgtct 720
gatttgagtt gatttctgca aatataaaaa ataataagaa taatcctgca agatctcaga 780
ggaactctaa gactggctaa caccagtttc tccaggttct ccatttctct tcaggtcgtt 840
ccatttgtat gttaggcctt ctttcagttt ctttgtttcc cctttcctt tccgtcggct 900
aattttttct gtgttctgaa gtactcttaa gtcttcagaa atatcagtat gtcttcttaa 960
caatgtcgct atggaaacaa attttaaaaa catgatgtca gttgagaaaa ccttatgtcc 1020
aggtatcttc acctttttaa ttgggaggaa tttattaatc atgtaggaag acattttgtg 1080
aggataattt gaaaaaagga cccagtgcta ccctagtcca cacacattga tgggagctct 1140
tcacatatta gttttagaga atgtacataa ttgacccaag caaagaacta aatcccgaaa 1200
tgcttcagga attttttaaaa gccaa 1225

18

```
<210> 32
<211> 844
<212> DNA
<213> Homo sapiens

<400> 32
tctgccatgg tgacaattat tttaaattta gatgagatca tcataacatg acacataaaa 60
attgtttcat catgcatatc aagtttgata tgtagcttaa atttattttg cacacactag 120
aatttgtcct ggttttctag tacctcaagg cagatatgca aaggtgttta ggagacatac 180
tctcagacaa accattatta ttttaaagga tagaacaaaa caatcgctag ttaaggaaga 240
tgttttgtaa taattaaact tgtaattatt tgacttgaaa tatttaatca ttttttttggg 300
aaagaatgga tagattttgt taatgttagc actcttaaaa ttaagcagtg gcttttttcc 360
ccgtgtctcc catattctcc ttgtgtttga aacataaaac aaacactaaa cctaagcaaa 420
agttgctggg tttgttttca taattgaggt gagttttcc ctcaactatt acaataaaag 480
aaaacttttt atgattttaa tgataatgtt ttgtggtggg ttaaagacct cctaacaaca 540
ggggggtttt atacaacaac aagaagtttt taaataattg agttttttaaa gtggaaagca 600
gcagtaaatt aaactagaag gatatatttt atacctagaa ataaataaag ctcaacttgt 660
tttgtaagcc tgttttaaaa atatttaatc atttaatttg tgcaagtata gagttctcct 720
atggcaaaac tataccatca tcttctccaa ttgtgcatgg cagctgtact aagttctgca 780
aaaacaagac atatggatgt gtttcatacc ttctcagaat tggtatatca agacacattt 840
aaat                                                                    844


<210> 33
<211> 2483
<212> DNA
<213> Homo sapiens

<400> 33
gatctagaac tagtcatcgc gagcggcctt tttttttttt tttttttaaga tggagtttcg 60
ctcttgttgc ccaggttgga gtgcaatggc gcgatcttgg cttactgcaa cctctgcctt 120
gcagttcaag caattctact gcctcagcct ctcaagtagc tgggactata gacattcacc 180
accacaccca gctaattttt tgtattttta gaaaattttg tatatttaga aaaggtttca 240
ccatgttggc caggctggtc ttgcactcct gacctcaggt gatccgccca cctcagcctc 300
ccaaagtgct gggattacag gcctgagcca ctgtgcccag ccctcaagta actcttaaac 360
ctactgaagt tagacaatca ataactgaaa tgacatcatc tttcttgaat gtttaaggaa 420
ataaagttcc ttcttctgac aaactttaag tgtgttcttg atttccttgc ctccctcttc 480
ctctgggagt tttcttccct agctgctcac tttcattatc aacgaaatat tcctcttcac 540
gcctttttac cttataccta caacatgctc agttctctct ctttacaaga aaatataagt 600
tttcaccaac ctatttatca aatttacatc cccctccctt tctacttcct tttgtaaaaa 660
aagagcattc aacctattgt ctgtctccat gccctcacat tatcagtgca agcacccgca 720
actgtggctc tccaccatgt gagctcaacc tatcatcaca actgtatctc ccctaacact 780
catttagatt aagccatttt tcacaagttt ctaaaattat ctcttccatt tctcagtata 840
accctttctt tcccttcaca gtttcttgaa ccaatctcac tagtccttca acgttcactt 900
ccaaggccac cccgaacaca tcttttcctc ttccctaaat aaattctact ggattctttc 960
tgttttttcac tggaaacttc tcatactcca ttggttcctt tctcatgaca tttattttac 1020
atccctagta ttctggtttc ttacattttt tttcctatct actaaacaat aacttctttg 1080
agaactggac cagtgtctct tatatttata tccctaataa tacttattaa acacgtagtc 1140
```

```
tattctcaac attgaattcc atcttatact caaagaataa tactttaaca tagccattgt 1200
tcatagtgta tatataatta agaacacatt ccatattttt cttgagatta tatagtgtta 1260
aattttttcaa aattatagga tatgatctaa agatatattt taaaactcaa acctgtaatt 1320
ttatcttcag ttatgctata gcatgtacat ttccattctc ttgtcgaagt ttctttcgtt 1380
cctcagcttc tccttcatat ttcctgacgt attgtcttct aagccttcag agaacaaggc 1440
attctaatgt tatcaaggtt ctattcatct atatgtttga ttggggtttt tatgagtaga 1500
gggggttcca cttcatgagt agtgatagac cagcaatcac tatacttgac actaaaccta 1560
aacctggcta taaaatatta ccaatttcta aggggggtatt tatgttgact gtatataaat 1620
ccatttccag agggcttata tttaaatgtg tcttgatata ccaattctga gaaggtatga 1680
aacacatcca tatgtcttgt ttttgcagaa cttagtacag ctgccatgca caattggaga 1740
agatgatggt atagttttgc cataggagaa ctctatactt gcacaaatta aatgattaaa 1800
tatttttaaa acaggcttac aaaacaagtt gagctttatt tatttctagg tataaaatat 1860
atccttctag tttaatttac tgctgctttc cactttaaaa actcaattat ttaaaaactt 1920
cttgttgttg tataaaaacc ccctgttgtt aggaggtctt taacccacca caaaacatta 1980
tcattaaaat cataaaaagt tttctttttat tgtaatagtt gagggaaaaa ctcacctcaa 2040
ttatgaaaac aaacccagca acttttgctt aggtttagtg tttgtttttat gtttcaaaca 2100
caaggagaat atgggagaca cggggaaaaa agccactgct taattttaag agtgctaaca 2160
ttaacaaaat ctatccattc tttcccaaaa aaatgattaa atatttcaag tcaaataatt 2220
acaagtttaa ttattacaaa acatcttcct taactagcga ttgttttgtt ctatcctttta 2280
aaataataat ggtttgtctg agagtatgtc tcctaaacac ctttgcatat ctgccttgag 2340
gtactagaaa accaggacaa attctagtgt gtgcaaaata aatttaagct acatatcaaa 2400
cttgatatgc atgatgaaac aattttttatg tgtcatgtta tgatgatctc atctaaattt 2460
aaaataattg tcaccatggc aga                                        2483


<210> 34
<211> 591
<212> DNA
<213> Homo sapiens

<400> 34
aatccattta aagtcaacta aatgttattt gggtaatatg tccctcatgt taaatttgcc 60
caaatatata tctcacctct taaaattcgt ttagtttgaa attaaaatta gtattgtttt 120
tctgcatgta ctcctaggtt gggtaaagaa gggaacaagg gaatggggaa acgtagagat 180
tcctggacta acagagaaag acagcttgag aataaaagta tgcaaagat aatctacaac 240
aaaataatgc acttaactct tgttactaaa caaataagct acccacattt cagcttatct 300
gtatttgttt catgatttgt cagctatcta gcaactatct tagtcactga ttcggaacga 360
cttagcagtg gttattgcat agaacaactc cttacacaga gatttgcaag ctttctgaac 420
tttcgtactt tcaaattgaa aatcaggaga aacattttca acggcttcat attcagacca 480
agattagtat attaacaact aataacaata ttaaaagtta gaacaattcc tttcctctat 540
ctttctcagg acaaactcga gcttattaga aaactaggga gtgatctggt g          591


<210> 35
<211> 306
<212> DNA
<213> Homo sapiens


                                20
```

<400> 35

```
cctagggaga atcagcaagg aaaagatcaa tgtaatcttg aataacttat cctgaaactt 60
ctccagagtt acccagagag tcaacagtca tgctgctttt tgtacttagt ctggtgtttc 120
agtaccagtt taacacataa aaagtgatca aggtgcaagg gacacagctt tgaaatagtc 180
agacctggat ctgaatctgt gattctgtca tctgcaataa gtttctaact tctccaagcc 240
ttagtttttt atctgtaaag gggagtatta actagagatg aggattaaat gaaaagtcac 300
ttactc                                                         306
```


<210> 36
<211> 617
<212> DNA
<213> Homo sapiens

<400> 36

```
ccaagactga gttagatttt ctattatgta ctcccatggc aacagcattt tccacttaac 60
ttgttggaaa agggacaact gtcctctggg ggctctgttg ccaatatttg ttccactttc 120
tctttcattt tcactttctt ccttacactt gcaatccaga gtccagatgt aaaacagtgt 180
agggccataa gtgatgggac atctctaaca aaattcttgg aggctgctgc ctggaaactt 240
gtgtccttgg gatggtaccc ttacccctga ggtgctaggg atgggcccca gggtctttcc 300
ctgctttcta ctttcctaat ggctaagtga tgtcagagga caacatcttg atgtgtagag 360
gtacaagaat tcagggatgc aaggatgcct tcctgcaaga cagagatcat tctatctaaa 420
ccaatgtttt caggtttttt actaggagca catgcatgaa tgtgtatata tgtgtatagc 480
tatgcaaaaa catgaacaga tgtatgcatg tgtataatct aaaacacata aaggtacata 540
tactgacata ctgaaacaca tattaatata accaaaaata aaaatttcat gagacagtat 600
taatgtttac cacatgc                                              617
```


<210> 37
<211> 725
<212> DNA
<213> Homo sapiens

<400> 37

```
ccaagactga gttagatttt ctattatgta ctcccatggc aacagcattt tccacttaac 60
ttgttggaaa agggacaact gtcctctggg ggctctgttg ccaatatttg ttccactttc 120
tctttcattt tcactttctt ccttacactt gcaatccaga gtccagatgt aaaacagtgt 180
agggccataa gtgatgggac atctctaaca aaattcttgg aggctgctgc ctggaaactt 240
gtgtccttgg gatggtaccc ttacccctga ggtgctaggg atgggcccca gggtctttcc 300
ctgctttcta ctttcctaat ggctaagtga tgtcagagga caacatcttg atgtgtagag 360
gtacaagaat tcagggatgc aaggatgcct tcctgcaaga cagagatcat tctatctaaa 420
ccaatgtttt tcaggttttt tactaggagc acatgcatga atgtgtatat atgtgtatag 480
ctatgcaaaa acatgaacag atgtatgcat gtgtataatc taaaacacat aaaggtacat 540
atactgacat actgaaacac atattaatat aaccaaaata aaaatttcat gagacagtat 600
taatgttaac cacatgctat atacttatat ttttctttca tttgcaaaag aatgctgtta 660
tgactgtcta aacctctggc ttgagaaaaa aaaaaaaaaa aaaaagatct ttaattaagc 720
gtgcc                                                          725
```

<210> 38
<211> 90
<212> DNA
<213> Homo sapiens

<400> 38
gtaaaatatc tgtctcactg gcaattttt ttacattgaa tttgttgaca atttttttac 60
attgaatatg ttaaaatttt tatatattgg   90

<210> 39
<211> 222
<212> DNA
<213> Homo sapiens

<400> 39
tgtagagatg ggatctctct ttgttgcccg ggctggtctg gaattctctg ggttcaggtg 60
atcctgctac gtcagccatg agccacggtg cccagcctgg caggcttggt ttctcttaat 120
gcctctcctt ggcttgcaag atggccacct tctggctgtg tcctctctct catggccttt 180
cctttgtggg cacacatcct tgttctctcc ttcttcttat aa   222

<210> 40
<211> 257
<212> DNA
<213> Homo sapiens

<400> 40
gttttcccat tgactaacgc ttaagatata ttggagtcaa atgctcataa aatgctcatc 60
caatgcttat aaaatattag agttgaaatg gactctctgt tcatgcagat gatgagaccg 120
aaacagagag cttccaggag gatcaatgcc attcaatgag cttgctgctg tactcccctc 180
tacacaatat ggatatatcc catcccagcc cgagactggc catactagtt ctagtaactg 240
aggctttcct cctactt   257

<210> 41
<211> 263
<212> DNA
<213> Homo sapiens

<400> 41
gctcgaggtt ttcccattga ctaacgctta agatatattg gagtcaaatg ctcataaaat 60
gctcatcaat gcttataaaa tattagagtt gaaatggact ctctgttcat gcagatgatg 120
agaccgaaac agagagcttc caggaggatc aatgccattc aatgagcttg ctgctgtact 180
cccctctaca caatatggat atatcccatc ccagcccgag actggccata ctagttctag 240
taactgaggc tttcctccta ctt   263

```
<210> 42
<211> 533
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (501)
<223> a, c, g or t

<220>
<221> unsure
<222> (514)
<223> a, c, g or t

<220>
<221> unsure
<222> (528)
<223> a, c, g or t

<400> 42
atacagagtc gtgttggatt ggcagtctta aatcactctt gttatttcca gtggacatta   60
aaaaaaaatc acagataagt acttaaaaca ctcaagattt gggatttaga tcatgattag  120
atacaataga aagatcctgg aatcccgaca tgaggacaaa aatggtactg aattcttttt  180
gaaaaataga ttactgaaaa gcgatctaat atagaacagt tgcttttact tagatgttca  240
atgcatattt gttgtataat aaccaagtta ttacagttca gataaagggt ccaaagtgtt  300
ttcgttatga tataatactt tctattgtaa actggactaa agaaacgttg tatgttcaag  360
gaagtgttga gcagccatgg tgttcctggg acatgctccc caggtgctga gagaggtgct  420
gcaggagtca cagacctgca ggcacgcact tgccagtgac tgggacgttg gctggtggtt  480
ctcttttggt gtgattagag ntatgtgagt tgtntcaata cttgagantg tcg          533


<210> 43
<211> 676
<212> DNA
<213> Homo sapiens

<400> 43
atacagagtc gtgttggatt ggcagtctta aatcactctt gttatttcca gtggacatta   60
aaaaaaaatc acagataagt acttaaaaca ctcaagattt gggatttaga tcatgattag  120
atacaataga aagatcctgg aatcccgaca tgaggacaaa aatggtactg aattcttttt  180
gaaaaataga ttactgaaaa gcgatctaat atagaacagt tgcttttact tagatgttca  240
atgcatattt gttgtataat aaccaagtta ttacagttca gataaagggt ccaaagtgtt  300
ttcgttatga tataatactt tctattgtaa actggactaa agaaacgttg tatgttcaag  360
gaagtgttga gcagccatgg tgttcctggg acaggctccc caggtgctga gagaggtgct  420
gcaggagtca cagacctgca ggcacgcact tgccagtgac tgggacgttg gctggtggtt  480
ctcttttggt gtgattagag ctatgctgta caggaagcat ggctggggag gcctcgggaa  540
```

```
acttacaatc atggtgaaag gcaaagggga agcaggtttg tcccataatt cttcgggcct 600
ctctcaagcc ttcgagtgga tgctgtttca tatttcatcc agcctgggag ttggagacct 660
gagctgcatt acctaa                                                  676


<210> 44
<211> 251
<212> DNA
<213> Homo sapiens

<400> 44
caggcctgct cagcaagatt ttcatgggat tagtgaattg gtggttgcca aatgccataa 60
taatgcacca tgcagtagac ttgctgtaaa gcacagtttc atcataacaa taactgtaaa 120
taatgctact gaacagctac agagcactcc tctgaactca ctggaatggg ctatatccca 180
tggcaagatg agtaagcctc aagcgcaaaa atctcaccct tgtttccctt tttttttggc 240
agaaatcccg a                                                       251


<210> 45
<211> 606
<212> DNA
<213> Homo sapiens

<400> 45
agcgcccatg ggattaggga gagcatggcc ttcagaggct ggagctgtag tcctaactgc 60
acagctggtc cagcagggcg taacgcatct acctagagag taaaatgaca acagttgttc 120
cctaagctca gcacttgcaa agaaatcttt tgggaagatc tcttcaaatg tctagaactc 180
tgcgcaaaca ataggtagga caagtgtgaa cctacccaac ctctgttgac aaatacagct 240
gcacacccct cagcgaggcc tgctgtgaaa tgccaccttg gtgaaaatga gaataaaggg 300
tgagtgagcc agctgctttt ggatgaccaa attaattctt agcctcccat taagacaggc 360
ctgctcagca agattttcat gggattagtg aattggtggt tgccaaatgc cataataatg 420
caccatgcag tagacttgct gtaaagcaca gtttcatcat aacaataact gtaaataatg 480
ctactgaaca agctacagag cactcctctg aactcactgg aatgggctat atcccatgca 540
agatgagtaa gcctcaagcg caaaaatctc acccttgttt cccttttttt ttggcagaaa 600
tcccga                                                             606


<210> 46
<211> 455
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (14)
<223> a, c, g or t

<220>
```

24

<221> unsure
<222> (16)
<223> a, c, g or t

<220>
<221> unsure
<222> (18)
<223> a, c, g or t

<400> 46
agaaaaggag agananangg agggagggag aaagaaagaa ggtaaattga gacagcacta 60
agtgctatgg agagaattaa aggtgagcca tgtaatgtgg ctgaagaatt aggttaaatt 120
gggtgttccc atggcctaag ggggtgacat ttaagttagg gttaacatgg agaggtgagc 180
aggaagagag tttcaaatca tgtgagagct agtcccaatg ccgtaaggag gaaatgggat 240
tggtgtgttt gaggaactga ggaagggcag ctggagtat ggtacatgaa aaagaccgtg 300
acaaagaata agattgggca catagatggc agttccatct tctcacgttg tatgccaaag 360
taagaagttc ctaatttact gatagcaatg tgaacccaat gagaaacttt taaaagaaga 420
atgaagccat ctggttaagt atttaaaagt tcatt 455

<210> 47
<211> 367
<212> DNA
<213> Homo sapiens

<400> 47
catctggtgg cttctttcgt gcaacacatt cttaccaaat gcccgctgca caccacgcat 60
gcactgtcct gagcgctagg aacagcagca accaggaccg gcagggctca gagcctcccc 120
tgtgtgccaa gaatacagac agcccaggca gagggcattc ggtgctccag acacaaagtg 180
aaggcccagc ttcaaatgtg gctggatcca ggcacacatc ctgaggttct gctggtctgg 240
actgctaacc cactcacgag gatccattct caagcagccc cagcctgtct ccccacctgg 300
gcacgtcatg gctggggtct cttgatgggc aaggctccat tgatcgagtc ccctttggac 360
tggggca 367

<210> 48
<211> 249
<212> DNA
<213> Homo sapiens

<400> 48
gttttattgt tttcatgcat tcttaggtct tctactgcat gcttcctaaa aacagggtca 60
tcctgtctca gacctttcac tgaactcaaa ctgtgcttct cttgccagtc tcccgatgaa 120
gggcctgcca gggaaataaa cttggttgag acaaaattct tgtaaataag ctcatagagg 180
ggacagactc ctgctccatt cctcccaccc ctcacaaggt cttccaaatt agcggaaaac 240
agtctaaat 249

25

<210> 49
<211> 436
<212> DNA
<213> Homo sapiens

<400> 49
aaaatgacct tcttttgctg ttttcctgac cacaaggtgg attctgccca tcagggcctc 60
cctttacctt ggcacacaag ggcctccatc ctggggcacc ctcccacctg ccccacccct 120
ccaacctaac tacttgccat ttcccaaata catcgtgcag tgcctggtgt ctatcctgtg 180
gttcatgctg cttcctctgc ctgcaatatc ctttccctgc aatagcctct tccacccagc 240
agacgcctcc tcactctctt ggctcagctc taagtcatat cccctaggga agcttaccag 300
gatgctgcag tcagatggag tgtctcctcc tgggccccca cagaccctgt acttccttct 360
gtgacagcaa caatcccaca gcagtggaac tgcttacctg cctgagctcc tggagggcaa 420
ggatgccatg ttgctt 436

<210> 50
<211> 853
<212> DNA
<213> Homo sapiens

<400> 50
cctggataat aaatgcctaa ctctcaccaa ctaccttgcc atcatgggct tcttcgatca 60
gaaatctagt aagagagtat ggtggggggct gcgagaccca tcatcactac caaaaaacat 120
gaagtctttt cactttcaat atgtgaagac ctaaattatg taattggatg aatgatattt 180
gtagagtcaa agagaatgtg agttctccgt cttatgggta tagttattat gtaataatca 240
agtaatgtgg tcttttattg tcttaatctt tcacaaacca ttgctttcct actccaatag 300
gaagcctgat cagatactag atagctctta tatattgcca atgtatggac tgatgaaact 360
gaggctcaga gaggaagtaa aataaagcat ggctcccccc tactggttta ctatattcca 420
aagttattaa acacctggcc agcactgctg tgtaggttgt acactgcaca attgtgtccc 480
ttctaaggag tcagtgttca aatcacagac atcagagatt tattatgata attttctgg 540
cagatggcag taaagtagct tattctaaca aaattgggaa tataaagact attttctaac 600
agatggaagt agttttttga agcaggtgag ccttttcctg atgctcactc aggtgctaga 660
tggactagca gaaagaatgg cgtcattgat gtccctttgt atgtgttacc cagtttaatc 720
ctggggaatt ttacttttg ctggaaaagg agtcaccctc ccttgccaac cacatgtgtg 780
gttatacatt ggtattgcag agtgatgcca tttacaagta atacatttga gttggcagat 840
ttcccaaggt ttc 853

<210> 51
<211> 383
<212> DNA
<213> Homo sapiens

<400> 51
tgaaaattga ccaacaacca gaagtgacag caacaacaaa ataccaagtc agtaaagatg 60
gagagaaata gggaagcagt gaaggtagat gtcatttctg tttttagtgg tggaatacaa 120
ggtgttcttg tgcttaaagg tcatgttctt gtgataaaac gcactgcaga gacaacatag 180

26

```
tttaattggc tgaggcaggt gactcccttt aagcatcagg gtggaacaaa ctacacgaca 240
aaatgtaatt ttaaaaacca ctctcattca aatgtaagaa tatcaaagca cccttaactc 300
attacatgag tgaaacaatg agtgtcatgg tctgaattgt gttcccctcc ccaaacccgt 360
atgttcaagc cttaaaccct agt                                         383


<210> 52
<211> 3342
<212> DNA
<213> Homo sapiens

<400> 52
tgaaaattga ccaacaacca gaagtgacag caacaacaaa ataccaagtc agtaaagatg 60
gagagaaata gggagcagtg aaggtagatg tcatttctgt ttttagtggt ggaatacaag 120
gtgttcttgt gcttaaaggt catgttcttg tgataaaacg cactgcagag acaacatagt 180
ttaattggct gaggcagtac ctactgcacg acccccacg tccgcctcct gccattgcca 240
gcaggtgcct tgcgccggta cctggctgcg cttattcatc cattatggtc gctctgtcac 300
tggtgccatt atgtgctcac atgcccactc cctcaggttt agaagtcgcg ttgcccggca 360
acagaacaat ctgctggctt agcctttggc caagttggca gctggacgag gacgctcaga 420
gcccagctct tgagagttca agtatccgac agttccccac tgctcccagg agcggttacc 480
cgggcactct gtgcccctca ttcctgtttg ggccaaggcc gaggacctgc gagtaccaca 540
gtaagccagt gctgtgtgct ccgagttcca gggcatcccc cagctcagcc actacactga 600
gcacaaggac tctgtggggc ccaggagcag gtagtcaccc ctttggggtc cacaacaccc 660
ggctgtcccc agacttgtgt ccagggaaga tagtgttgag ggccctcaag gagagcgggg 720
cagggatgcc tgagcagcac aaggacccca gagtccaaga aaatcctgat gatcagagaa 780
cggtccccga ggtcaccggg gatgcacggt ctgcattttg ccccctgcgg gacaatggag 840
gcccctctcc ctttgtgccc aggcccgggc tctgcagac agacctccac gcccagagct 900
cagaaatcag atataaccac acatcccaga catcctggac gagctcgagc accaaacgaa 960
atgccatctc cagctcctac agctccacgg gaggcttgcc ggggctaaag cagaggaggg 1020
ggccagcctc atcccgctgc cagctgaccc tcagttactc aaagacagtg agtgaggaca 1080
ggcctcaggc tgtctcttcg ggtcacacac ggtgtgaaaa gggggcagat acatcaccag 1140
ggcagacaat cgccccaacg ggtggctccc ccagatccca tgactctagg ccccgtagac 1200
gcaagattcc cctgctgcca cgcaggcgag gggagccttt gatgctgcca cctcccttag 1260
agctggggta ccgggtcacg gctgaagacc tgcacctgga aaaagagacg gcattccagc 1320
gcatcaacag tgcactgcac gttgaggaca aggccatccc ggactgcaga ccctcacggc 1380
cttcccacac tttgtcctca cttgcaacag gggcttcggg tgggcctccc gtttctaaag 1440
cacccactat ggatgcacag caggacagac ccaagtccca agactgcctg ggcctagtgg 1500
ccccccctagc atctgctgca gaggtccccg ctacagctcc cgtgtctggg aagaagcaca 1560
gaccaccagg acccctgttc tcctcctcag atccccttcc tgccaactct tcccactccc 1620
gggactcagc ccaggtcacc tcgatgattc ctgccccctt cacagctgca agcagggatg 1680
ccggcatgag aagaacaagg tcggctcctg cagctgccgc agcagcccct ccccctcca 1740
cattgaaccc cacgtcgggg tcgctactca atgcagtgga tggaggcccc tcacatttct 1800
tggcctcagc cacagctgca gcacgtgccc agaggtcaga agtgagatat aaccagagat 1860
cccagacctc ccggaccaga tcctgcctca aacgaaatgc cagctccagc tcccacagct 1920
ctacggaagg cctccaggaa gtaaagcgga ggaggggcc agcctcatcc cactgccagc 1980
tggcccacag ttcctcaaac acagtgagtg aggacggacc tcaggctgtc tcttcgggtc 2040
accgctgtga aaacaaggca ggtacagcac cagggcagac acttgccccc aggggtggct 2100
cccccagatc ccaggcctct aggccccaca tcaacactgc actgcacgtt gaggacaagg 2160
```

27

```
ccatctcgga ctgcagaccc tcacggcctt cccacacttt gtcctcactt gcaacagggg 2220
cttcgggtgg gcctcccgtt tctaaagcac ccactatgga tgcacagcag gacagaccca 2280
agtcccaaga ctccctgggc ctactggccc ccctagcatc tgctgcagag gtcccctcta 2340
cagctcccgt gtctgggaag aagcacagac caccaggacc cctgttctcc tcctcagatc 2400
cccttcctgc cacctcttac cactcccggg acacagcaca ggtcacctcg ctgattcctg 2460
ccaccttcac agctgcaagc agggatgccg gcatgagaag aacaaggtcg gctcctgcag 2520
ctgccacagc agcccctccc ccctccacat tgaacaacac gtcggggtca ctactcaatg 2580
cagtggatgg aggcccctca catttcttgg cctcagccac agctgcagca cgtgcccaga 2640
ggtcagaagt gagatataac cagagatccc agacctcccg gaccagatcc tgcctcaaac 2700
gaaatgccag ctccagctcc agctcccaca gctctacgga aggcctccag gaagtaaagc 2760
ggaggagggg gccagcctca tcccactgcc agctggccca cagttcctca aacacagtga 2820
gtgaggacgg acctcaggct gtctcttcgg gtcaccgctg tgaaaacaag gcaggtacag 2880
caccagggca gacactcgcc cccaggggtg gctcccccag atcccaggcc tctaggcccc 2940
acatcaacag tgcactgcac gttgaggaca aggccatctc ggactgcaga ccctcacggc 3000
cttcccacac tttgtcctca cttgcaacag gggcttcggg tgggcctccc gtttctaaag 3060
cacccactat ggatgcacag caggacagac ccaagtccca agactgcctg ggcctactgg 3120
ccccccctagc atctgctgca gaggtcttct ctacagctcc cgtgtctggg aagaagcaca 3180
gaccaccagg acccctgttc tcctcctcag atcccctttcc tgccacctct tcccactccg 3240
gggactcagc ccaggacacc tcgctgattc ctgcccccctt cacacctgca agcagggatg 3300
ccggcatcag aagaatgttt cgtgttcgaa attgtttgag gg                      3342
```

28

<213> Homo sapiens

<400> 55
catgccgtgg cccatgccca tttgcacagg gacgcagggg gtctcacaca caggcagggt 60
ccgcccccag ctgccgtcgg cgtcagtcca cacacatagg cttttgggcg gtgctggaag 120
cttctggccc ctgaacgttc cccccaggcc ccgtttccag ggaaagggat aggcaggcgc 180
acgctgcggc cgtttccaca atccgacctc gtagctgggg cgtgccg 227

<210> 56
<211> 271
<212> DNA
<213> Homo sapiens

<400> 56
catctttttta atattcagta tgaccgaata aagcactggt gctgccttag taacaatggt 60
tgtnctcaag gtaaacttct catgtgcttg tttcagttgt gagctcaatt agcctctttc 120
tcatgaaatg aatgcctttt tacttgaaag aatgactgag agccaggcta tggatattca 180
aacatgtatt tttcagacac ttcttgaaaa taagtgaagc aaacctgtta attacaaggg 240
aagcaatgac aatatttgtt gccaatgata a 271

<210> 57
<211> 573
<212> DNA
<213> Homo sapiens

<400> 57
gggcaagaca gctgtgggag ttgttggttc cagtatcttt ttcttccttt ccggatggga 60
agagtgcatc tctcttggcc cacaaatgtg tttgcacact aaggtgatgg catccttaga 120
aggaagcaga gcagtgctct gaccttcgct tctggaaccg agaaaatgat gccatgctgc 180
tttgttggtg tgattgttgt tggttttttg tggatgaatt ttaaaatagt atttgtgact 240
atcatttcat gtgtccactc tttttaaaaa tgttaccttt tctaggattg gcagaatttg 300
gaattatatg tcttattaaa tatgctttga aagacagaag taataagttc tggttaatct 360
tttatagtgt ttgtcttggg agcaaatagt atgagagaga ggtgtgagaa tgggaataat 420
aatctaacat atcaaaatta gagaacccca aaccatcaca ttctttctct ttgtgccatt 480
ttagaattga gaataccgtc cttcttactg tggttatatt tttacttttg tatataaact 540
tgtagcagaa aataagattc agtagcttaa agg 573

<210> 58
<211> 843
<212> DNA
<213> Homo sapiens

<400> 58
gggcagacag ctgtgggagt tgttggttcc agtatctttt tcttcctttc cggatgggaa 60
gagtgcatct ctcttggccc acaaatgtgt ttgcacacta aggtgatggc atccttagaa 120

29

```
ggaagcagag cagtgctctg accttcgctt ctggaaccga gaaaatgatg ccatgctgct 180
ttgttggtgt gattgttgtt ggtttttttgt ggatgaattt taaaatagta tttgtgacta 240
tcatttcatg tgtccactct ttttaaaaat gttacctttt ctaggattgg cagaatttgg 300
aattatatgt cttattaaat atgctttgaa agacagaagt aataagttct ggttaatctt 360
ttatagtgtt tgtcttggga gcaaatagta tgagagagag gtgtgagaat gggaataata 420
atctaacata tcaaaattag agaaccccaa accatcacat tctttctctt tgtgccattt 480
tagaattgag aataccgtcc ttcttactgt ggttatattt ttactttttgt atataaactt 540
gtagcagaaa ataagattca gtagcttaaa ggggccaggc actgtggctc atgcccgtaa 600
tcccagtggt ttagaaggct gaggggaagg atcacttgag gcctggagtt tgaaatcaac 660
ctgggcaaca tagcaagact ctgttccttc aaaaaaaaat ttttaaaaat tagctgagca 720
tggaggtgca tgcctataat cctagcaatg attataccat tacactccag cctggatgat 780
agagtgacac cctgtctcaa agagaaaaaa aaaaaaaaaa aattctgcgg cgcaagaatt 840
cgc                                                                843
```

<210> 59
<211> 221
<212> DNA
<213> Homo sapiens

<400> 59
```
cgggactgga agggtgtgcc ctcgccgtcc tcgccttcgt cttgcacggg acaagatgtc 60
acgattccga atccaaacct cagagacagc ccccatccct ctcgttagcc acccacacac 120
cccgctcagc aacaataaca acctgcattt agggaacgtg tgttatgtgc caggccacac 180
aggcattatc tcatgtactc ctcacaggca ccttatcaag g                      221
```

<210> 60
<211> 535
<212> DNA
<213> Homo sapiens

<400> 60
```
gcacgtgggg tcggggtggg ggcgaagggc cgcttggcct ctgtagggtc gggactggaa 60
gggtgtgccc tcgccgtcct cgccttcgtc ttgcacggga caagatgtca cgattccgaa 120
tccaaacctc agagacagcc cccatccctc tcgttagcca cccacacacc ccgctcagca 180
acaataacaa cctgcattta gggaacgtgt gttatgtgcc aggccacaca ggcattatct 240
catgtactcc tcacaggcac cttatcaagg agatgctgtt gttacctgca ttttacagat 300
ggggaaactg aggctcaatg cattaaggac tgccaggaag ccctgtcctg tggctgtgat 360
gatggaaatg ttccctgtgt tgttcagtat ggtagtcact ggccacaagt gagcactgga 420
aatgtgccta ttgagactga ggaactgatt ttttcatttt gtttaattgt aattaaacag 480
ttacgtgtgg ctgtggtatt ggaaaaaaaa aaaacaaaaa aaaaaaaaaa aactc        535
```

<210> 61
<211> 514
<212> DNA
<213> Homo sapiens

<400> 61

```
cgtctcactg atatccccctt cagttctccc aaatcaccct ttctgaaaca tacatccgat 60
catgtcattc ctttgcaaaa ctaagtttcc ctttgcactc aaaacaatat ctgaatgtct 120
tgctctggtt tctcaggccc cgcctctacc actggcctca gctcttcccc tctctccatt 180
gctcactgaa taacagccac caagacctcc ttgccattgc tcaaacatgc aaggcctaca 240
cctgccacag ggccttggca catgctattc catctgttta caatgcttgt ctccacatgg 300
ctacttcttt gtagcagttg gtctcagctc aaatgtcatg tccccaacca gcctacctaa 360
agcagttctc cctacctagg cctttcttgc tcaccatgta aaagattcct atttagtttc 420
tgttattatc cttcttgctc tagaatggaa gccctacgag ggcaagatat ttttctgtat 480
cggtcactgc tatagcttca acaccaagaa catg                            514
```

<210> 62
<211> 598
<212> DNA
<213> Homo sapiens

<400> 62

```
tttcttctgg tcttattcct ctggatctaa atatatcaac attgacatgt gaggtcagaa 60
ttttatcatt tgaaaaattt ttttcacttt actgaaaatt cagtcacttc ttcctgaaga 120
aggaagcaat tgcatatcaa ttttcttcta ttccagctta atctatttat ttttctcttt 180
tacattaaaa cattctttta atgatatatg ctgcctgtaa atatttccca cccactttcc 240
agaggtaatc cactgttatc aagtaagttt agtaaatttt ttttaattga attttctcaa 300
taggtcatta acgtgtttca aagttgaaaa attacaaaac tatgtgtcgt gaaaagtctc 360
cttctttccc ttgtgtccca agctacctag ttcttggagc cagttgatgt tatcagattc 420
tttggtattc tttcagacac acatggtatg cattatttga gcaaggggc gtgggtgtgt 480
gtccctctgt ttttaagttc taaatgttag catgctacac atactttttt catatatttt 540
cttaagtaac ttcatttcat tatatgtatt ccacttgta aaattagata ctacatgc   598
```

<210> 63
<211> 648
<212> DNA
<213> Homo sapiens

<400> 63

```
tgaatttctt ctggtcttat tcctctggat ctaaatatat caacattgac atgtgaggtc 60
agaattttat catttgaaaa attttttttca ctttactgaa aattcagtca cttcttcctg 120
aagaaggaag caattgcata tcaattttct tctattccag cttaatctat ttattttttct 180
cttttacatt aaaacattct tttaatgata tatgctgcct gtaaatattt cccacccact 240
ttccagaggt aatccactgt tatcaagtaa gtttagtaaa ttttttttaa ttgaattttc 300
tcaataggtc attaacgtgt ttcaaagttg aaaaattaca aaactatgtg tcgtgaaaag 360
tctccttctt tcccttgtgt cccaagctac ctagttcttg gagccagttg atgttatcag 420
attcttttgt attctttcag acacacatgg tatgcatttt tgagcaaagg ggcgtgggtg 480
tgtgtccctc tgttttttaag ttctaaatgt tagcatgcta cacatacttt tttcatatat 540
tttcttaagt aactttattt cattatttgt attcagtttt gtaaaattag atactacatg 600
catgtggttc aaaagtaaaa tgatgtaaag gctaataata tgtaatag            648
```

<210> 64
<211> 601
<212> DNA
<213> Homo sapiens

<400> 64
gaggtaagcc cattctcacc ctacaggcag ggtagggagg ggcacattct gagaagtgga 60
tatcacaagt tgtccctcat gtggatccca tgacttgagt agtgggaaac tccaagctga 120
tttgaagatt ctttatttga gagtggacct gcacacctag tgttcctggg tcagtccagg 180
ggcgagcaga tcattgaagg actgcacctt tatcctaggc tcaccaaatc cccaggtgta 240
attatcaaac gaaagagaat agtccatagt taggaacaac taaatgcaaa ggatgaaata 300
gcactgaatg aggaccagca ggaagagatc tcagaaaaca taagataatg gacttgttga 360
catagatttt aaaggcctta ctcaaactaa ataggcaaga ttgaaaatac ctatgaggaa 420
gaggaaacta tacaatgacc tagcaaattt gaaaaaggaa ccaggaacaa cttgtagaca 480
tgaaaagttc atgtctttat aataaaaatc taacagatgg atttactagc agattacata 540
aaactgaaga gagtgaatga cctggaaagt agagaagaag aaatataatt tagagaacca 600
c 601

<210> 65
<211> 1216
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (58)..(125)
<223> a, c, g or t

<220>
<221> unsure
<222> (1204)
<223> a, c, g or t

<220>
<221> unsure
<222> (1206)
<223> a, c, g or t

<400> 65
tctcctgatc ttggacatca gaactcctga ttctcaagcc tttgggtttg gactggannn 60
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 120
nnnnntaact ctaatacacc agtacaatgg aaagattcct aaattcaaaa gccagaaggc 180
tgggttcctg ttcccaccct gccttttacc ttctgtgtgt tcctgatgaa gacacttcat 240
gctccactat ttacttacct ctgaaacgaa gggctgaccc agatcagttg ttctctgacc 300
tgcttggagg gactcagagg ctgtggagag tgaatatttc catcagctga tgcccttctc 360

32

```
aggcctcaat ctcccctggt ttgcagactg tggccctcct tggcctctgt ggaatctggc 420
catttgaatc ctgtcagccc tgtttccat caccaaagga ctccggagga actgtgccaa 480
gcaggctgtc agccacgggc aagctttctg aaaagacgt gccaactgca gccacagaaa 540
gtccattccc ttgaataact ctgctaatat ttgaaaatta gttcccttgc tcctgatcat 600
gctactgggt atttggatat aagagccaag gatgagggca atagaaaatt aaaatcatgt 660
tctactcata taaactgcac agatatggaa gggtaggtcc tattacctat aatcctggga 720
tttttagact ctcactttca ttggaccaga gttgccttag ggacagtaaa aacacaaat 780
gctgggtatt gttttcatca agcaactact gatagtgcac atttaaatca aaattcttct 840
aatcccaaac tcagtaaaca gatgctgtga gcttagttct gcccctctgg cttcagattt 900
taccccactg gatgtgccca attctgagat gacaagacgc ttccagcttc cacatggttg 960
caatttggct gtggaactgg catgaaagca cgtcactgtg tcagcacctg ggccaccaga 1020
tgaataacct atgaacaaca gctttggact aaaatatgaa ggggttgttt ccttcaatc 1080
tccccctacc ttcctcagaa cctgctacaa ggaaagattt atagactcga aagcgtcaat 1140
gactgattag acccatatga ttgctcctgc tgtttctgat attttaaaaa attgtcttat 1200
aaangnataa aaataa                                                 1216


<210> 66
<211> 1430
<212> DNA
<213> Homo sapiens

<400> 66
gctcaccaat gtgggtgggc ctcattcaat ccattgcaga cttgaataga actaaaagga 60
agaggaaggg caaatttgtt ggctgcttga gctgggatat tcatctttct cctgatcttg 120
gacatcagaa ctcctgattc tcaagccttt gggtttggac tggaggcacc agctttcctg 180
ggcctccagc ttgcagatgg catatcatgg aacttctcag cctccaaatt cataactcta 240
atacaccagt acaatggaaa gattcctaaa ttcaaaagcc agaaggctgg gttcctgttc 300
ccaccctgcc tttaccttc tgtgtgttcc tgatgaagac acttcatgct ccactattta 360
cttacctctg aaacgaaggg ctgacccaga tcagttgttc tctgacctgc ttggagggac 420
tcagaggctg tggagagtga atatttccat cagctgatgc ccttctcagg cctcaatctc 480
ccctggtttg cagactgtgg ccctccttgg cctctgtgga atctggccat ttgaatcctg 540
tcagccctgt tttccatcac caaaggactc cggaggaact gtgccaagca ggctgtcagc 600
cacgggcaag ctttctgaaa aagacgtgcc aactgcagcc acagaaagtc cattcccttg 660
aataactctg ctaatatttg aaaattagtt cccttgctcc tgatcatgct actgggtatt 720
tggatataag agccaaggat gagggcaata gaaaattaaa atcatgttct actcatataa 780
actgcacaga tatggaaggg taggtcctat tacctataat cctgggattt ttagactctc 840
actttcattg gaccagagtt gccttaggga cagtaaaaac acaaatgct gggtattgtt 900
ttcatcaagc aactactgat agtgcacatt taaatcaaaa ttcttctaat cccaaactca 960
gtaaacagat gctgtgagct tagttctgcc cctctggctt cagattttac cccactggat 1020
gtgcccaatt ctgagatgac aagacgcttc cagcttccac atggttgcaa tttggctgtg 1080
gaactggcat gaaagcacgt cactgtgtca gcacctgggc caccagatga ataacctatg 1140
aacaacagct ttggactaaa atatgaaggg gttgttttcc ttcaatctcc ccctaccttc 1200
ctcagaacct gctacaagga aagatttata gactcgaaag cgtcaatgac tgattagacc 1260
catatgattg ctcctgctgt ttctgatatt ttaaaaaatt gtctcataaa gagatacaaa 1320
taaataatca atggcaaact tctggcatgg gagagacatt tagggaaaga agtcatctca 1380
gcctccccca acacacacat gcacacacac atacagctgc aaacacaatt            1430
```

33

<210> 67
<211> 430
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (72)..(139)
<223> a, c, g or t

<400> 67
gggatattca tctttctcct gatcttggac atcagaactc ctgattctca agcctttggg 60
tttggcctgg annnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 120
nnnnnnnnnn nnnnnnnnnt aactctaata caccagtaca atggacagat tcctaaattc 180
taaagccaga aggctgggtt cctgttccca ccctgccttt taccttctgt gtgttcctga 240
tgaagacact tcatgctcca ctatgtactt acctctgaaa cgaagggctg acccagatca 300
gttgttctct gacctgcttg gagggactca gaggctgtgg agactgtggc cctccttggc 360
ctctgtggaa tctggccttt gaatcctgtc agccctgttc tccatcacca aaggaatccg 420
gaggaactgt   430

<210> 68
<211> 829
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (240)..(354)
<223> a, c, g or t

<400> 68
gtatgtacta cccacataag tgggacactt tgaacaatga aatatagatg ttttcaccaa 60
agaagggagt cttattttttt tccgacttca gacaattcat cttcatccat taattttttcc 120
ttttttgtaat atgtaccttt atgctaattt ttaatatgca aataacttac aaatatatgc 180
tcagcatttg agtacaggct gtgctttatt acatattaca tgcatgtatg caatgtactn 240
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 300
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnacaaaa 360
taaaatttgg aatgaagcag gaattatctt ggactattta taatttatta agatactaaa 420
taccgtcatt atgaaatggt ctcattaagt gatccctgtc taaagagttg cataatagtg 480
agacaataag gggcttagtg tattttttttt cttttgaaca taagctattg tacatttgtg 540
ccaacaggac ttctttatag agtctcattt tcctattaca atattattttt tgttattaag 600
tgaaacacct catatcacca ccactgctga gccagatata atagactgta ctgtgtaagg 660
ttcttaaaac tcacatctat aataaccaga cctcttttttt tatattgatt caaattatgt 720
ttaatgctga attataagca aaacctacaa gaataaaatc attttatgct ttgaaactga 780
ctccttttttt aaaaaaagaa tgatcacaac taccaactcc ctcatctat   829

34

<210> 69
<211> 541
<212> DNA
<213> Homo sapiens

<400> 69
atagactagt aaagtctgtt tttatataaa agtgacacag gaagctgtta caatctagga 60
atgggcaggt atggtcagtg gttgtcacaa tagagccacc caaggagaca tctcttctcc 120
agatcctaac agagtgcatc ttgtgctttt cctaacagac ctgtcggact ggcttttct 180
cttttaagga tatagagaaa gcaaaattag caaatctagt ttcttgtcac tttactagga 240
gggaggaaaa gagagaaaga atgcacttgg gaatgggagg ccttgctttt aatttaccag 300
atgccagtta gagcgttaat gccacacgag ccagagaggt caccttgctg agcatggctt 360
gactgttgca gcctctttct gcgactccag acatgcgatg tctgttagct gattctagcc 420
ttcagatgca gcccggagat gtaaccctga ggctggagtc ctgtggctct aatcccagac 480
agaggcaact ccaccaagtt ctggtttggg tcagaaatag agggaaagga tgaatgaaag 540
a   541

<210> 70
<211> 696
<212> DNA
<213> Homo sapiens

<400> 70
atagactagt aaagtctgtt tttatataaa agtgacacag gaagctgtta caatctagga 60
atgggcaggt atggtcagtg gttgtcacaa tagagccacc caaggagaca tctcttctcc 120
agatcctaac agagtgcatc ttgtgctttt cctaacagac ctgtcggact ggcttttct 180
cttttaagga tatagagaaa gcaaaattag caaatctagt ttcttgtcac tttactagga 240
gggaggaaaa gagagaaaga atgcacttgg gaatgggagg ccttgctttt aatttaccag 300
atgccagtta gagcgttaat gccacacgag ccagagaggt caccttgctg agcatggctt 360
gactgttgca gcctctttct gcgactccag acatgcgatg tctgttagct gattctagcc 420
ttcagatgca gcccggagat gtaaccctga ggctggagtc ctgtggctct aatcccagac 480
agaggcaact ccaccaagtt ctggtttggg tcagaaatag agggaaagga tgaatgaaag 540
aagatacaaa gaaataatga acaagtgagt tctttcagct gcttacttgg gtggtctgca 600
ggcagcaaga gacaggaagg aggctgttgt ggggtccttg ttcgaggcag tgggagattt 660
gctcagaggg gttgtgtggg aagtgagaga aggggt   696

<210> 71
<211> 1207
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (957)
<223> a, c, g or t

35

<400> 71

gcagtgccag gacctctccc ggaggcgggg cagagcagca gcttctcggc cctgtgccga 60
gcccaggcct gcacccctaa ggcaggcact gctccgtgat ccaggaacca cctctctcta 120
cagctgggag tgagcagtca gagagggaga cagccttgcc cggtgctacc cagcaagcta 180
gtcaccgagt gggcagaggg aggagcggcc ctcaccggat gtcaagcagc ctgggtcccc 240
agtccagctc tgcctgtccc tcgcaataac gcctcagtga cgaccatttg tgagccatct 300
ctctgtctca ggcacggtgc tacatgccaa cgaaacctgc tcccattgaa ccctggccag 360
ccagtgaaga aagggttggg cctgggaggt gccactttac agacaggggc accaaggggc 420
agggtggcag gaggcccacc ggacgttccc catgaagtag cagtcccagc atccacaccc 480
agcaggcacc acgctggccc gcagcctccc tgccagcacg cctggcttcc cggcctcgga 540
acttgatctg ctccctcttc cggacactgg ggctcctgcc aagtcctggg ctgggcagca 600
actgctgaac attctaagaa atccctccca gggtttttctc aggagcccgg gtggggcagg 660
aagtccccag gggctgaggg gaccgtggcg gcaggtggca cccagagcag cactctcctg 720
gggcccaggc tgttgggcca gaggcaggac tgtgaggcct agtgtagggc ctcctgccag 780
tggccggcac ctacttgtgg ggctgggggt tcccccagca ggttgggctc cccacctgac 840
acactcacag accttgtgcc ttggagagcc agtgttcccg gggccacata gctatgccgc 900
ccaggggctg ggcctgtccc agctctggtc ccccggcccc aggtcctgga cgctggntcc 960
gcgcagcagc aggcggcctc cggaggacac gatgtgactg gctgccgcta cgtcgcactc 1020
agatgagtct gcgccggatc gacctgctgc cgagtcctgc cggacaggca caggcaggga 1080
gtgaaaatta tctacccctt tttatttctt aataactgaa tgaaaataaa cattggtggt 1140
ttgacaaata actacatatt ttcaaaccca gccagtccag gggatgcagt ttccaggtgc 1200
gttatgc   1207

<210> 72
<211> 263
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (231)
<223> a, c, g or t

<220>
<221> unsure
<222> (239)
<223> a, c, g or t

<220>
<221> unsure
<222> (242)
<223> a, c, g or t

<220>
<221> unsure
<222> (248)

36

<223> a, c, g or t

<220>
<221> unsure
<222> (259)
<223> a, c, g or t

<400> 72
gtcctacttc aataatttaa aaaaatattc tgggatttgc attcctcaaa tttcagccct 60
cattttactt tacctgtcta cagtgttttg cgcaattgac cactccttcc tttttgaagt 120
attttctttc cttggtttct gaaatactgt tatcttccta tctcactggc catacattct 180
agtctccttt gctagtttat tatggttttc atcttctcaa caacaatttt ntttttttng 240
gnggagangg agtcttgcna tgt 263

<210> 73
<211> 579
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (547)
<223> a, c, g or t

<220>
<221> unsure
<222> (555)
<223> a, c, g or t

<220>
<221> unsure
<222> (558)
<223> a, c, g or t

<220>
<221> unsure
<222> (564)
<223> a, c, g or t

<220>
<221> unsure
<222> (575)
<223> a, c, g or t

<400> 73
tggtgtttga gtcctaaaaa ttgtatacca gtgctaattg ggatatacca aacttttgt 60
ctcttagtaa ttagttttgt tttgttttgt tttgttttaa tgttgtgctt atcttaaggt 120

37

```
gtaaatgcag acaaagttgg aattgaagct gccgaaatgc tattagcaaa tcttagacat 180
ggtggtactg tggatgagta tctgcaagac caggtaatga cacatttagg ttaaaaaccc 240
tctaacctgt tagatttgaa tatgtggtag attgaatatc aatttaaata attgactttc 300
agacactaat tagcaagtcc tacttcaata atttaaaaaa atattctggg atttgcattc 360
ctcaaatttc agccctcatt ttactttacc tgtctacagt gttttgcgca attgaccact 420
ccttcctttt tgaagtattt tctttccttg gtttctgaaa tactgttatc ttcctatctc 480
actggccata cattctagtc tcctttgcta gtttattatg gttttcatct tctcaacaac 540
aattttnttt ttttnggngg aganggagtc ttgcnatgt                       579


<210> 74
<211> 339
<212> DNA
<213> Homo sapiens

<400> 74
ctctgttcct tgctcatctt catggtgatt gggggtagat cagatgagtg tgtaaaagcc 60
ccttgaaagc tggaaagagc ttaacaaata tcagctgttg ccatgaaaga atatttgctt 120
actttccatt gtgtataaga taacgataat catagaatta atattattca acttccttgt 180
gtcttttgca catttctgta cagtcctgtt tttgtttgtt actgtcattc tcaaagtact 240
caagttgaat tttgtcactt tggatttctt ccaggaatat gtgagagaca tttaggtctc 300
taatgatgaa gtattttcta ggcgtaatgc aaaagattg                       339


<210> 75
<211> 299
<212> DNA
<213> Homo sapiens

<400> 75
caacgacaga taacttcgtg atggaaaatg taggtctcct tagtagttag ccctctgcca 60
ggtgacttcg tttccacctc cccttatata ttgttcttcc ttcctctcta aattctctaa 120
atctctgctt atacagagca atctggctct ctctggcctc tccagtcatc atacatcata 180
ctcacattca ccatcttgag aagtgcagta agccacataa atgcagcaga agtaccttat 240
gcagtcctag gaggctgtgg ttttgagttg cttttttttt tcttttggga gacggagcc  299


<210> 76
<211> 247
<212> DNA
<213> Homo sapiens

<400> 76
tgtatattga gctcctactg tgtggcaagg cctatggtaa gcattttatt ttggtaactt 60
gtttaatcct cattacaatt ctgtggtaaa tgctattatc tgttttata ttgaagggat 120
gaaatggagg ctcagaggga tatgtagtag ctaaatgtta gagctaggat tganacccaa 180
attgacttct gagtatagat ttccccccaa ctgtatgata cttcatattt ggagtcagct 240
tgaagta                                                           247
```

38

<210> 77
<211> 254
<212> DNA
<213> Homo sapiens

<400> 77
tgtatatttg agctcctact gtgtggcaag gcctatggta agcattttat tttggtaact 60
tgtttaatcc tcattacaat tctgtggtaa atgctattat ctgtttttat attgaaggga 120
tgaaatggag gctcagaggg atatgtagta gctaaatgtt agagctagga ttgaaaccca 180
aattgacttc tgagtataga tttcccccca actgtatgat acttcatatt tggagtcagc 240
ttgaagtaat tcac 254

<210> 78
<211> 504
<212> DNA
<213> Homo sapiens

<400> 78
tgatttgatt tggttttaaa atagaatagt tgtactctga gggaggaggg aaatgcttaa 60
acaatactaa gaattccatt ctttagagac aaattactta gaagttgata gtgacatatt 120
gaaagggttg ttgattgttg gattattcag gtgatgaaga tgatggtagg ggccatggcg 180
gctgagggag aatgagtctt aaacactgag gaggcacaaa agattgggtg gctggatata 240
ataggaaact ggaacgaaag aaggagaaga gaatggcgat actgataaaa aatagaatga 300
aagaagatgt gtggaaaaga aagtttcact ttgaaggctt gatttttgaa gtgatggcag 360
atatagatat acatccaata gatgagtggg aaaagtaaat caaacagaaa tgaaaaattg 420
agtccaagat tgatgggaga ctaataatgg ggaggactga gcctgggggc aactacatta 480
gtaacagtgg caggtttttgt tttt 504

<210> 79
<211> 210
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (80)..(99)
<223> a, c, g or t

<220>
<221> unsure
<222> (173)
<223> a, c, g or t

<220>

<221> unsure
<222> (175)
<223> a, c, g or t

<220>
<221> unsure
<222> (206)
<223> a, c, g or t

<400> 79
gtccctctag agaaccctga ctaatacagg tggttcctgg ctcatggcag tgtgactcca 60
gtctttacat ggcgttcccn nnnnnnnnnn nnnnnnnnnc aaatttcctc ttttcataag 120
gaccgtggta ttggataggg gtccacccta cttcgatatg accttatttt aantncatct 180
ttgatgaccc tgtttccacg taaggncaca   210

<210> 80
<211> 161
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (116)
<223> a, c, g or t

<220>
<221> unsure
<222> (148)
<223> a, c, g or t

<400> 80
gagggtcaga agcagaaaga tgacatcata agaaagactc aactggccat ttttggcttt 60
gaaggtggaa aggggacctg agtccaggca tgtgggcagc ctggagaagg cgaganaatg 120
gattcttccc cagaatccct ggaaaggnac gtggccctaa c   161

<210> 81
<211> 112
<212> DNA
<213> Homo sapiens

<400> 81
tagcaccttt taataactct ttttagagta atttagagca aactagataa attttaatat 60
atatctcatt gcatactttt atgtaacttt gtcttagaaa aacaagagtt ct   112

<210> 82

40

<211> 277
<212> DNA
<213> Homo sapiens

<400> 82
tgaaatgatg acaccagtag aatatggtga gatatgtata cacaatgtaa tacctagagt 60
gacaatttaa aaacctatac aaagagtgac acataaataa acaaaaacaa cataaaaata 120
aaaatataat tctaaaaata ttcaagtagc caattggaag gtggaaaaaa gaaaaagaac 180
aaaaaataga acagcactaa acaaaaaata aaatcgcaga cctaggccct gacatatcaa 240
taattatatt aacatgtaaa tggtctaaat tttacca 277

<210> 83
<211> 637
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (92)..(196)
<223> a, c, g or t

<220>
<221> unsure
<222> (230)..(316)
<223> a, c, g or t

<220>
<221> unsure
<222> (367)..(428)
<223> a, c, g or t

<400> 83
gtccttnggt gttgcaccaa acaggctaag aagcaatgac attgattatg aggaacttgg 60
aactcagatg tattaatttc ctattgtgtc tnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 120
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 180
nnnnnnnnnn nnnnnncact ttctttctgt aggctctagg agagaatcta gnnnnnnnnn 240
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 300
nnnnnnnnnn nnnnnnccaa gtccttctca cactgctgtc tttttggttc tctctcttgc 360
ctgcctnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 420
nnnnnnncat agttgattag cagccttaat ccatctgtaa ttttaattcc cttttgccag 480
gtaatgtggc cattatcttg cctacaacct cagaggatgt tgataatgta aagggtagtg 540
aattggggag ttcatagggt ttgatagttg acaaatacag agtgtagtat taggtagggg 600
tttttttggca gggtgcagtg gcccatacct gtaatgt 637

<210> 84
<211> 577

41

<212> DNA
<213> Homo sapiens

<400> 84
caggcataag ccaccacacc tagccaagaa accattcttt gaacacaagc aaatatactt 60
tggagaaaaa tttaataatc ctggcagggc tacattcaac ataattctgt tatgggggaa 120
ggcagcatgc tttggctgct cagtgagcta tgttctgtac aaccaagtga aattgctaaa 180
aaaagattct cctgtataca gtaacttaaa gtgatgcagt ctacttaaga tcagatctga 240
gttacaaaat caaaagtgac agctcctatg ttctttaaa gtccaatctc ttttttcat 300
tgttgtgctc caaatgcctt gagtacctga tgtagagtag gtggctaata aatattggtt 360
gaatttcttg aacgaatctg ttatgaaaag atctactttg ctcatctctg tgccccaata 420
gcaggagctt gaggagaagg agaaaatatt gggtcagagc ttttgattaa tatgtatgat 480
tctattaaac gggttcacta aaccaaaaaa ggcaaggaaa acagttaaac caagagtctt 540
gaggttcaag tcttgtgatg attaaatcat catccta 577

<210> 85
<211> 687
<212> DNA
<213> Homo sapiens

<400> 85
ttcccatgtt agccagggct ggtcttgcac tctgaacctc agggtatcac ccccccttgg 60
gctcagggct catggctgat attacaggca taagccacca cacctagcca agaaaccatt 120
ctttgaacac aagcaaatat actttggaga aaaatttaat aatcctggca gggctacatt 180
caacataatt ctgttatggg ggaaggcagc atgctttggc tgctcagtga gctatgttct 240
gtacaaccaa gtgaaattgc taaaaaaaga ttctcctgta tacagtaact taaagtgatg 300
cagtctactt aagatcagat ctgagttaca aaatcaaaag tgacagctcc tatgttcttt 360
taaagtccaa tctctttttt tcattgttgt gctccaaatg ccttgagtac ctgatgtaga 420
gtaggtggct aataaatatt ggttgaattt cttgaacgaa tctgttatga aaagatctac 480
tttgctcatc tctgtgcccc aatagcagga gcttgaggag aaggagaaaa tattgggtca 540
gagctttga ttaatatgta tgattctatt aaacgggttc actaaaccaa aaaaggcaaa 600
ggaaaacagt taaaccaaga gttcttgagg ttaaagtctt gtgatgatta aaatcatcat 660
cctaagatga tgatgacata aactttc 687

<210> 86
<211> 77
<212> DNA
<213> Homo sapiens

<400> 86
tgtcgtttta caactgtcgt gactggtgaa acccctgtgc gttaccctaa cttaatctgc 60
cttgcatgca catcccc 77

<210> 87
<211> 575

42

<212> DNA
<213> Homo sapiens

<400> 87
cacacacgtg cacacacaat actcacttaa caaacattta atttattgaa catttattat 60
atgccaaagc tggtataaga caccaaaaga gtaagacaga aagtattctt ccctggagct 120
ttgtctgact ttccaagctt tattaggcat caaacaaaac tgaagtgctt tttaagattc 180
aagtctccta cgtcgtctaa ggcagagtaa gtagccttca gtactatatt ttactctaat 240
tttttttttaa cacaatggca gtactataag tatgaaactt tggtataaat gtcagattct 300
agattgtgct cctgctttct gcacactcta atatttttaa acatctcgaa aatacagagt 360
ggcagcaaaa ttacctgtaa aaacatacta gctcaagagt ttgacaggct caaaataaat 420
taccttaaat acattaaaca agaagtgtat ttgttataca gtatgtactg accaaaatta 480
aagtgcaggt tgtacagaaa gagctgcttg tgttatttta tgagcaaaat gaaaagctaa 540
tttggtacat ttaaaaatca gcatctagca aattc 575

<210> 88
<211> 663
<212> DNA
<213> Homo sapiens

<400> 88
cagtaattcg gcacgaggcg cacttttttt tttttttttt tataaaaaca gtcaacactt 60
gccccaccct actcccagca tatgcacaca cacacgtgca cacacaatac tcacttaaca 120
aacatttaat ttattgaaca tttattatat gccaaagctg gtataagaca ccaaaagagt 180
aagacagaaa gtattcttcc ctggagcttt gtctgacttt ccaagcttta ttaggcatca 240
aacaaaactg aagtgctttt taagattcaa gtctcctacg tcgtctaagg cagagtaagt 300
agccttcagt actatatttt actctaattt ttttttaaca caatggcagt actataagta 360
tgaaactttg gtataaatgt cagattctag attgtgctcc tgctttctgc acactctaat 420
atttttaaac atctcgaaaa tacagagtgg cagcaaaatt acctgtaaaa acatactagc 480
tcaagagttt gacaggctca aaataaatta ccttaaatac attaaacaag aagtgtattt 540
gttatacagt atgtactgac caaaattaaa gtgcaggttg tacagaaaga gctgcttgtg 600
ttattttatg agcaaaatga aaagctaatt ggtacattt aaaaatcagc atctagcaaa 660
ttc 663

<210> 89
<211> 80
<212> DNA
<213> Homo sapiens

<400> 89
gattggatgg tgtttcagaa aacaagcctc tattcaaata atattttact ataattcttg 60
ttaaaaatac tgtatactaa 80

<210> 90
<211> 496

43

<212> DNA
<213> Homo sapiens

<400> 90
gccgactttt tttttttttt tttttgtatt tttagtagag acggggtttc aacatgttgg 60
ccaggatggt cgtgatctcc tgacctcgtg atccgctgcc ttggtctccc aaagtgctgg 120
aattacaagc gtgacgcact gtgcccagct tagtatacag tatttttaac aagaattata 180
gtaaaatatt atttgaatag aggcttgttt tctgaaacac catccaatct gaaagtagaa 240
gaaaaaggct gggtgtggtg gctcatgcct gtaaccccag cactttggga agctgaggcg 300
ggcggatccc ttgagctcag tttgagacca ggctgggcaa ctccatcttt accaaaaaat 360
acaaaaatga gccaggcatg gtggtgtaca cctgtggtcc cagcggctct gggggctgag 420
gtgggaggaa ggcttgggcc taggaggtgg aggttgcagt gagccaggat tgtgccactg 480
ccgatagagc cagata 496

<210> 91
<211> 385
<212> DNA
<213> Homo sapiens

<400> 91
gaaatgggtc cggacaggtt aaaacaaaaa tccaatactg ccgtagtttc taggtggata 60
taacattttt agaaatctta taatacaata ttaacttcat tggctgaacc caagcctttc 120
agcctttata gatttgccat gatcctaata catataagca ttcattgtat tcattattaa 180
ttacttcata gattcagtgt gtgacgaagg gagatgattt ttaacaaata ataaagtgaa 240
atgatctagt tttgctatgt tgnttgagca acatcaaata gttttgctaa aatagataat 300
ttatagtgat ttttttttca ctatggnatt ttcttaaata tattaagggc tttcattttc 360
tgataccacc tagtttaatt ggggg 385

<210> 92
<211> 500
<212> DNA
<213> Homo sapiens

<400> 92
gaaatgggtc cggacaggtt aaaacaaaaa tccaatactg ccgtagtttc taggtggata 60
taacattttt agaaatctta taatacaata ttaacttcat tggctgaacc caagcctttc 120
agcctttata gatttgccat gatcctaata catataagca ttcattgtat tcattattaa 180
ttacttcata gattcagtgt gtgacgaagg gagatgattt ttaacaaata ataaagtgaa 240
atgatctagt tttgctatgt tgtttgagca acatcaaata gttttgctta aaatagataa 300
tttatagtga ttttttttc actatggtat tttcttaaat atattaagtg cttttcattt 360
tctgatacca cctagtttaa ttgggggtga atatcagaga aattagaatg ttatttcagc 420
tgaaggagta cagtttttttt tttctcttct tagagaatat agtgcctcag atacagtcca 480
caacaaaaat tttggtttag 500

<210> 93

44

```
<211> 364
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (19)
<223> a, c, g or t

<220>
<221> unsure
<222> (21)
<223> a, c, g or t

<220>
<221> unsure
<222> (35)
<223> a, c, g or t

<220>
<221> unsure
<222> (40)
<223> a, c, g or t

<220>
<221> unsure
<222> (60)
<223> a, c, g or t

<220>
<221> unsure
<222> (70)
<223> a, c, g or t

<220>
<221> unsure
<222> (92)..(93)
<223> a, c, g or t

<220>
<221> unsure
<222> (95)
<223> a, c, g or t

<220>
<221> unsure
<222> (97)
<223> a, c, g or t
```

<220>
<221> unsure
<222> (121)..(122)
<223> a, c, g or t

<220>
<221> unsure
<222> (131)
<223> a, c, g or t

<220>
<221> unsure
<222> (148)
<223> a, c, g or t

<400> 93
ttaggtccaa actcaggtna ncaaaactag tcccntcagn ccaattgctt gtacatttcn 60
acaggcaccn ctttggcaaa cccacatgga tnntnanaaa tggagaatga ggagacagcc 120
nnatattaat nagatgtatc aaactgtnac aatatgtgaa gagtattgtg tatatacaaa 180
caggaaacaa ttgaaagcct tcaacatgtg tgggtggggg gagagataac tgaattaaca 240
ggccatgtag taaaacttaa aatcaaatcc agtagtcttg aaggtatagt aattgtttag 300
ttttgaaggt atagtaatta agtactgcgc actaaaaaaa actgaccaaa aggccgggtg 360
cggt   364

<210> 94
<211> 1646
<212> DNA
<213> Homo sapiens

<400> 94
ttaggtccaa actcaggtna ncaaaactag tcccntcagn ccaattgctt gtacatttcn 60
acaggcaccn ctttggcaaa cccacatgga tnntnanaaa tggagaatga ggagacagcc 120
nnatattaat nagatgtatc aaactgtnac aatatgtgaa gagtattgtg tatatacaaa 180
caggaaacaa ttgaaagcct tcaacatgtg tgggtggggg gagagataac tgaattaaca 240
ggccatgtag taaaacttaa aatcaaatcc agtagtcttg aaggtatagt aattgtttag 300
ttttgaaggt atagtaatta agtactgcgc actaaaaaaa actgaccaaa aggccgggtg 360
cggtggctca cgcctgtaat cccagcactt tgggaggccg aggcgggcgg atcacctgag 420
gtcaggagtt cgagaccagc ctggccaaca tggtgaaacc ccgtctctac taaaaacaca 480
aaaattagcc gggcatggtg gctcacgcct gtaatcccag cactctggga ggccaagaac 540
atgctgatgg tttatgccac aagttgacaa ctgtgtgtcc aactgtgaaa cctcagactc 600
aaggtctagc aaaagatgct tgggaaatcc ctcgagaatc tttgcgacta gaggttaaac 660
taggacaagg atgtttcggc gaagtgtgga tgggaacatg gaatggaacc acgaaagtag 720
caatcaaaac actaaaacca ggtacaatga tgccagaagc tttccttcaa gaagctcaga 780
taatgaaaaa attaagacat gataaacttg ttccactata tgctgttgtt tctgaagaac 840
caatttacat tgtcactgaa tttatgtcaa aaggtgctta ttccctttct attcgtgatt 900
gggatgagat aagggggtgac aatgtgaaac actacaaaat taggaaactt gacaatggtg 960

```
gatactatat cacaaccaga gcacaatttg atactctgca gaaattggtg aaacactaca 1020
cagaacatgc tgatggttta tgccacaagt tgacaactgt gtgtccaact gtgaaacctc 1080
agactcaagg tctagcaaaa gatgcttggg aaatccctcg agaatctttg cgactagagg 1140
ttaaactagg acaaggatgt ttcggcgaag tgtggatggg aacatggaat ggaaccacga 1200
aagtagcaat caaaacacta aaaccaggta caatgatgcc agaagctttc cttcaagaag 1260
ctcagataat gaaaaaatta agacatgata aacttgttcc actatatgct gttgtttctg 1320
aagaaccaat ttacattgtc actgaattta tgtcaaaaga gctccacaga cgctgcacag 1380
ctgtgaactc aactccagcc ctcagggaag gcagctcgca aagacctagg gcagcccgcc 1440
gatttcccaa aaagagcact gagaacccag caagcgtttt tctatatgat gctggcggca 1500
gcccagtgag ggaagtgcaa caagtatggt tctcctgctt gtcaactgtg aaacagcga 1560
ccctgaaagt ggaggagcca cagctggaat cgtgttcgtc tgaatacacg cacctttcct 1620
atgagccttg taaagccagt cgttga                                    1646
```

```
<400> 95
gagagtgttt tagcccagaa tagtggaacc ctcaggcaaa gtttataaaa attaatacca 60
ctgcagaaag tgattaaata ccatggactg taggtttagg tttctgctnn nnnnnnnnnn 120
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnngtgcata 180
atggagattt taatagtagc catctcataa ggtggttgca aaggttaaat gtgttaatat 240
gcatgatgca catagaacaa tgcctagcac atagtagaga tacataatca ctactatata 300
ctggtaccag tananggtca ggtcttatgg acctaaggtc atataactta gtctcttcca 360
agattcttga aatgatttct caaaacaaga gaatataaag aagaaacgtt atgaa     415
```

<220>
<221> unsure
<222> (212)..(231)
<223> a, c, g or t

<400> 96
atatcctaat atgagcatgc ccattattcc tctgtcctat gaaacaaaaa tggcattttt 60
caatggattt gttttggata tataattagt tcatttgctg tttagaagcc ttgccaaaag 120
tgtttagatt ttggtactgc aactgctttc ctcttgccca gaaatgtttt gcctcttctt 180
ttcctacaag ttaaatgttc taaatataaa gnnnnnnnnn nnnnnnnnnn naattctaat 240
gtgaaaggca ctagctgtct aataggtttc atgtatcatt actattacta tatgtatctt 300
aatgtagtct atgtaggttt ttatcagaaa gtgtaccttt ctatggttta ttattttata 360
ttctggggcc ttttatctca gatataaacc atgaacagta atgatagtcc ctgacatata 420
aatcttagta aaaagtgatt aaaaatctaa aactcagtat gaaaaacata tcttgttagc 480
ataaattaaa accttttatt gttt   504

<210> 97
<211> 516
<212> DNA
<213> Homo sapiens

<400> 97
atatcctaat atgagcatgc ccattattcc tctgtcctat gaaacaaaaa tggcattttt 60
caatggattt gttttggata tataattagt tcatttgctg tttagaagcc ttgccaaaag 120
tgtttagatt ttggtactgc aactgctttc ctcttgccca gaaatgtttt gcctcttctt 180
ttcctacaag ttaaatgttc taaatataaa ggggtatgtg tgtgtgtgtg taattctaat 240
gtgaaaggca ctagctgtct aataggtttc atgtatcatt actattacta tatgtatctt 300
aatgtagtct atgtaggttt ttatcagaaa gtgtaccttt ctatggttta ttattttata 360
ttctggggcc ttttatctca gatataaacc atgaacagta atgatagtcc ctgacatata 420
aatcttagta aaaagtgatt aaaaatctaa aactcagtat gaaaaacata tcttgttagc 480
ataaattaaa accttttatt gtttaaaaaa aaaaaa   516

<210> 98
<211> 400
<212> DNA
<213> Homo sapiens

<400> 98
aattagatct ttcctgcaat aaggatctag gtggaggttt tgaagactcg ccggctcagt 60
tggtcatgct aaagcatcta caagtcctag atcttcacca gtgctcacta acagcagatg 120
acgtgatgtc actgacccag gtcattcctt tactttcaaa tcttcaagaa ttggatttat 180
cagccaacaa aaagatgggc agttcttctg aaaacttact cagcaggctc cgattttac 240
cagcattgaa gtcattagtt atcaacaact gtgctttgga gagtgagact tttacagctc 300
ttgctgaagc ctctgttcac ctctctgctc tggaagtatt caacctttct tgggaacaag 360
tgtgttggtg ggcaacttga agctgcttct gggaaacact   400

48

<210> 99
<211> 2352
<212> DNA
<213> Homo sapiens

<400> 99
```
attttgattg aacacaggct tgacagaatc ttcttttctt cttagaaatc ctagaaaaca 60
gaaagcaaca ggaagatgtc ttattgggaa ctacccccat caacttcacc atgagtcaaa 120
caaggaagaa aacttcctca gaaggagaaa ctaagcccca gacttcaact gtcaacaaat 180
ttctcagggg ctccaatgct gaaagcagaa aagaggacaa tgaccttaaa acaagtgatt 240
cccaacccag cgactggata cagaagacag ccacctcaga gactgctaag cctctcagtt 300
cagaaatgga atggagatcc agtatggaga aaaatgagca tttcctgcag aagctgggca 360
aaaaggctgt caacaagtgt ctagatttga ataactgtgg attaacaaca gcggacatga 420
aagaaatggg agaagcattt gagatgattc ctgaacttga agagctaaat ttgtcttgga 480
acagtaaagt gggaggaaat ttgcctctga tccttcagaa gttccaaaaa gggagcaaga 540
tacaaatgat tgagcttgtg gcttgctccc tcacgtcaga agatgggaca tttctgggtc 600
aactgctacc tatgctgcaa agtctcgaag tacttgatct ttccattaac agagacattg 660
ttggcagtct gaacagtatt gctcagggat taaaaagcac ctcaaatctg aaagtactga 720
agttacattc atgtggatta tcacaaaaga gtgtcaaaat attggatgct gcttttaggt 780
atttgggtga gctgaggaaa ttagatcttt cctgcaataa ggatctaggt ggaggttttg 840
aagactcgcc ggctcagttg gtcatgctaa agcatctaca agtcctagat cttcaccagt 900
gctcactaac agcagatgac gtgatgtcac tgacccaggt cattcctta ctttcaaatc 960
ttcaagaatt ggatttatca gccaacaaaa agatgggcag ttcttctgaa aacttactca 1020
gcaggctccg attttacca gcattgaagt cattagttat caacaactgt gctttggaga 1080
gtgagacttt tacagctctt gctgaagcct ctgttcacct ctctgctctg gaagtattca 1140
acctttcttg gaacaagtgt gttggtggca acttgaagct gcttctggaa acactaaagc 1200
tttccatgtc tcttcaagtg ctgaggctga gcagctgttc cctggtgaca gaggatgtgg 1260
ctctcctggc atcggtcata cagacgggtc atctggccaa actgcaaaag ctggacctga 1320
gctacaatga cagcatctgt gatgcggggt ggaccatgtt ctgccaaaac gtgcggttcc 1380
tcaaagagct aatcgagctg gatattagcc ttcgaccatc aaattttcga gattgtggac 1440
aatggtttag acacttgtta tatgctgtga ccaagcttcc tcagatcact gagataggaa 1500
tgaaaagatg gattctccca gcttcacagg aggaagaact agaatgcttt gaccaagata 1560
aaaaaagaag cattcacttt gaccatggtg ggtttcagta aactgatttc ccatgtccta 1620
ctaagctaca aaccattctc caaaggaaaa gaacatgaac gaattccaga gtcatgaact 1680
gaatttcaac ttctgggcca tttaatggga cttatattac aagagctttg taaatatata 1740
tatatattac atatatatat gtaatataca tatatacaca tatatataat atacatatat 1800
aatacacata tatatgtaaa tatatatata atatctaata tgagcatgcc attattctct 1860
gtctatgaaa caaaaatggc attttcaat ggatttgttt tggatatata attagttcat 1920
ttgctgttta gaagccttgc caaaagtgtt tagattttgg tactgcaact gctttcctct 1980
tgcccagaaa tgttttgcct cttctttcc tacaagttaa atgttctaaa tataaagggg 2040
tatgtgtgtg tgtgtgtaat tctaatgtga aaggcactag ctgtctaata gtttcatgta 2100
tcattactat tactatatgt atcttaatgt agtctatgta ggttttatc agaaagtgta 2160
cctttctatg gtttattatt ttatattctg gtgcctttta tctcagatat aaaccatgaa 2220
cagtaatgat agtcactgac atataaatct tagtaaaaag tgattaaaaa tctaaaactc 2280
agtatgaaaa acatatcttg ttagaataaa ttaaaacctt ttattgttta aaaaattgtt 2340
aaaaaaaaaa aa                                                      2352
```

49

```
<210> 100
<211> 565
<212> DNA
<213> Homo sapiens

<400> 100
attttgattg aacacaggct tgacagaatc ttctttcctt cttagaaatc ctagaaaaca 60
gaaagcaaca ggaagatgtc ttattgggaa ctaccccat caacttcacc atgagtcaaa 120
caaggaagaa aacttcctca gaaggagaaa ctaagcccca gacttcaact gtcaacaaat 180
ttctcagggg ctccaatgct gaaagcagaa aagaggacaa tgaccttaaa acaagtgatt 240
cccaacccag cgactggata cagaagacag ccacctcaga gactgctaag cctctcagtt 300
cagaaatgga atggagatcc agtatggaga aaaatgagca tttcctgcag aagctgggca 360
aaaaggctgt caacaagtgt ctagatttga ataactgtgg attaacaaca gcggacatga 420
aagaaatggt tgccttgctg ccttttctcc cagacttgga agaactggat atctcctgga 480
atggtttgta ggtggaaccc tcctttccat cactcagcaa atgcatctgg tcagcaagtt 540
aaaaatcttg aggctgggta gctgc 565
```

```
<210> 101
<211> 13
<212> PRT
<213> Homo sapiens
```

```
<400> 101
Met Leu Leu His Asp Ile Asp Trp His Leu Met Ser Ile
 1               5                   10
```

```
<210> 102
<211> 14
<212> PRT
<213> Homo sapiens
```

```
<400> 102
Met Val Leu Pro Gly Ser Leu Ser Met Leu Thr Tyr Gly Met
 1               5                   10
```

```
<210> 103
<211> 23
<212> PRT
<213> Homo sapiens
```

```
<400> 103
Met Gln Val Leu Tyr Trp Thr Tyr Leu Leu Leu Ile Leu Phe Pro Thr
 1               5                   10                  15
```

50

Phe Thr Cys Leu Phe Ile Phe
            20

<210> 104
<211> 26
<212> PRT
<213> Homo sapiens

<400> 104
Met Asn Leu Tyr Met Asn Leu Pro Ser Ala Val Arg Phe Ser Arg Ala
 1   5   10   15

Thr Pro Leu Ile Ser Leu Phe Leu Ala Leu
            20   25

<210> 105
<211> 49
<212> PRT
<213> Homo sapiens

<400> 105
Met Thr Thr Lys Lys Gln Glu Glu Cys Glu Ser Leu Lys Asp Lys Gln
 1   5   10   15

Lys Ala Thr Lys Gln Ser Ile Ser Phe Cys Ile Tyr Ile Ile Lys Val
            20   25   30

Lys Phe Ser Thr Leu Ala Thr Asp Tyr Lys Ser Val Pro Ser Gly Cys
            35   40   45

Cys

<210> 106
<211> 61
<212> PRT
<213> Homo sapiens

<400> 106
Met Pro Ser Pro Ser Ala Pro Ser Ile Val Pro Val Leu His Gly Cys
 1   5   10   15

Trp Val His Ile Cys Gln Ala Asp Val Tyr His Thr Leu Leu Lys Gly
            20   25   30

51

Phe Lys Ser Val Phe Glu Thr Glu Ser His Val Val Ser Pro Arg Leu
        35   40   45

Glu Cys Asn Gln Ser Lys Thr Pro Leu Lys Lys Asn Lys
        50   55   60

<210> 107
<211> 34
<212> PRT
<213> Homo sapiens

<400> 107
Met Glu Leu Val Met Glu Trp Lys Leu Thr Ile Cys Ser Pro Lys Cys
    1   5   10   15

Ala Thr Thr Thr Gln Gly Leu Gln Thr Asp Ser Tyr Leu Asp Val Val
                20   25   30

Glu Ser

<210> 108
<211> 77
<212> PRT
<213> Homo sapiens

<400> 108
Met Val Asn Pro Ala Gln Glu Met Thr Leu Ser Arg Asn Thr Cys Lys
    1   5   10   15

Tyr Lys Lys Gln Asp Ile Leu Pro Gln Leu Arg Ser Asp Lys Ile Thr
                20   25   30

Leu Gly Lys Leu Gln Gly Gln Cys Ala Ser Lys Thr Lys Ser Leu Val
                35   40   45

Ser Ser Leu Thr Ser Tyr Leu Pro Ala Phe Ile Ile Ile Ser Leu Ser
        50   55   60

Val Thr Gln Tyr Leu Val Asn Phe Leu Phe Trp His Thr
65   70   75

<210> 109
<211> 59

52

<212> PRT
<213> Homo sapiens

<400> 109
Met Gln Cys Lys His Phe Phe Leu Thr Tyr Leu Thr Asp Gln Gly Gly
1   5   10   15

Gln Val Ala Leu Leu Ser Ser Phe Pro Pro Cys Gly Asp Ser Gly Ile
            20   25   30

Gln Ala His Ser Ile Thr Arg Leu Ser His Ile Gly Val Phe His Phe
        35   40   45

Gly Asp Glu Asp Glu Gly Glu Ser Gly Arg Glu
    50   55

<210> 110
<211> 91
<212> PRT
<213> Homo sapiens

<400> 110
Met Asp Val Met Gly Lys Leu Lys Gly Ser Cys Asp Glu Thr Gly Ser
1   5   10   15

Glu Asn Ser Asp Gly Asp Leu Ser Lys Val Ile Leu Pro Lys His His
            20   25   30

Leu Ala Ile Met Ile Pro Pro Asn Leu Ser Gln Phe Val Tyr Phe Ile
        35   40   45

Ser Arg Gly Ser Phe Ser Val Leu Ala Ser Cys Val Phe Val Phe Phe
    50   55   60

Phe Phe Ser Val Ile Leu Gln Ala Gln Asp Phe Leu Leu Asp Thr Gly
65   70   75   80

Arg Ile Ser Leu Leu Lys Glu Ala Gly Gly Thr
            85   90

<210> 111
<211> 45
<212> PRT
<213> Homo sapiens

<400> 111

53

Met Gly His Val Asp Gln Leu Ser Pro Arg Thr Thr Asn Leu Ala Cys
 1   5   10   15

Ser Asp Asp Leu Cys Ser Arg Gln Gly Phe Arg Leu Asp Cys Cys Ser
             20   25   30

Ser Leu Trp Arg His Asn Pro Asn Cys Glu Leu Leu Asn
         35   40   45

<210> 112
<211> 64
<212> PRT
<213> Homo sapiens

<400> 112
Met Leu Lys Met Ile Leu Ala Ser Ile Val Ile Asn Ser Val Ile Pro
 1   5   10   15

Glu Phe Phe Val Ser Pro Arg His Thr Asn Phe Cys Pro Leu Leu Leu
             20   25   30

Phe Ser Gln Ser Phe Leu Leu Ala Phe Leu Ser Asn Arg Val Leu Leu
         35   40   45

Thr Pro Tyr Ile Pro Phe Trp Leu Val Arg Val Ser Phe Ser Ser Ser
     50   55   60

<210> 113
<211> 25
<212> PRT
<213> Homo sapiens

<220>
<221> UNSURE
<222> (14)

<220>
<221> UNSURE
<222> (17)

<400> 113
Met Leu Leu Phe Thr Lys Leu Leu Ile Ile Met Val Ile Xaa Ile Asn
 1   5   10   15

54

Xaa Asn Asn Lys Leu Leu Gln Leu Phe
              20   25

<210> 114
<211> 57
<212> PRT
<213> Homo sapiens

<400> 114
Met Arg Ile Gln Asn Leu Thr Cys Leu Leu Leu Gly Ser Lys Glu Met
  1   5   10   15

Ser Thr Ser Ser Pro Leu Thr Pro Asn Gly Val Glu Gly Phe Gly Pro
              20   25   30

Gln His Cys Val Thr Tyr Ser His His Asp Phe Leu Ala Gln Val Thr
              35   40   45

Pro Ser Val Lys Trp Lys Arg Glu Glu
      50   55

<210> 115
<211> 147
<212> PRT
<213> Homo sapiens

<400> 115
Met Asn Glu Ser Trp Ala Gly Pro Gly Pro Ala Glu Arg Ala Glu Glu
  1   5   10   15

Ala Val Ser Gly Val Gly Val Glu Ala Lys Thr Gln His Ala Gly Gln
              20   25   30

Gly Ala Gln Pro Gly Gly Met Gly Cys Gly Phe Ser Ser Gly Pro Ile
              35   40   45

Gly Met Ala Leu Gly Leu Gly Leu Val Gly Thr Ala Ala Thr Arg Gly
      50   55   60

Gly Ser Ser Ala Trp Pro Asp Ser Thr Cys Asn Val Gly Arg Gln Trp
 65   70   75   80

Ala Pro Pro Gly Gly Arg Asn Thr Val Arg Ser Met Gln Arg Ala Gly
              85   90   95

55

Asp His Gly Ala Cys Asp Leu Arg Ala His Pro Gly Gln Thr Trp Val
            100   105   110

Arg Gly Gly Leu Gly Arg Gln Asp Ser Glu Gly Leu Gln Gly Val Phe
            115   120   125

Val Leu Cys Pro Tyr Thr Gly Asp Leu His Gly Arg Val Arg Ser Ile
        130   135   140

Arg Met Leu
145

<210> 116
<211> 73
<212> PRT
<213> Homo sapiens

<400> 116
Met Thr Ile Ser Leu Cys Ala Thr Asn Leu Pro Arg Ala Ala Thr Val
  1   5   10   15

Leu Arg Met Lys Pro Lys Leu Pro Gly Ser Gly Pro Val Gln His Glu
            20   25   30

Pro His Leu Pro Ser Gln Pro Gln His Pro Leu Leu Phe Phe Gln Ala
            35   40   45

Gly Gly Lys Leu Glu Ala His Pro His Phe Thr Gln Thr Leu Gly Ile
        50   55   60

Pro Ile Ser Gly Asn Arg Gly Val Phe
 65   70

<210> 117
<211> 48
<212> PRT
<213> Homo sapiens

<220>
<221> UNSURE
<222> (46)

<400> 117
Met Tyr Asn Ile Leu Lys Ala Phe Asp Lys Ile Val His Ile Ile Ser
  1   5   10   15

Asn Thr Ile Leu Tyr Tyr Tyr Gln Gln His Lys Ala Asn Val Ser Lys
                20   25   30

Asn Ser Arg Leu Arg Ile Ser Lys Asn Ser Pro Arg Ala Xaa Phe Arg
            35   40   45

<210> 118
<211> 38
<212> PRT
<213> Homo sapiens

<400> 118
Met Leu Pro Val Ser Pro Thr Leu Lys Glu Arg Asn Gln Arg Arg Met
 1   5   10   15

Leu Leu Lys Ser Thr His Leu Ala Ser Val Ser Ser Ala Ser Cys Thr
            20   25   30

Gln Thr Lys His Thr Gly
        35

<210> 119
<211> 55
<212> PRT
<213> Homo sapiens

<400> 119
Met Lys Ile Phe Ile Ile Ile Leu Ser Pro Leu Cys Gly Ile Leu Leu
 1   5   10   15

Asn Val Leu Glu Ser Leu Lys Phe Ile Phe Lys Cys Glu Ser Leu Leu
            20   25   30

Phe Val Trp Gly Glu Glu Cys Gln Val Gly Ile Met Asn Gln Ala Leu
            35   40   45

Pro Tyr Gln Val Leu Leu Tyr
    50   55

<210> 120
<211> 92
<212> PRT

57

<213> Homo sapiens

<400> 120
Glu Ser His Thr Leu Gln Val Ile Leu Gly Cys Glu Met Gln Glu Asp
 1   5   10   15

Asn Ser Thr Glu Gly Tyr Trp Lys Tyr Gly Tyr Asp Gly Gln Asp His
             20   25   30

Leu Glu Phe Cys Pro Asp Thr Leu Asp Trp Arg Ala Ala Glu Pro Arg
         35   40   45

Ala Trp Pro Thr Lys Leu Glu Trp Glu Arg His Lys Ile Arg Ala Arg
     50   55   60

Gln Asn Arg Ala Tyr Leu Glu Arg Asp Cys Pro Ala Gln Leu Gln Gln
 65   70   75   80

Leu Leu Glu Leu Gly Arg Gly Val Leu Asp Gln Gln
                 85   90

<210> 121
<211> 85
<212> PRT
<213> Homo sapiens

<220>
<221> UNSURE
<222> (51)..(72)

<400> 121
Met Ile Lys Val Ser Leu Thr Ser Ala Pro Lys Val Ser Ser Leu Glu
 1   5   10   15

Gly Thr Asn Arg Arg Glu His Ser Asp Thr Gln Gly Pro Leu Ser Val
             20   25   30

Pro Trp Lys Pro Ser Asp Leu Cys Arg Pro Ile Ser Val Arg Lys Trp
         35   40   45

Val Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
     50   55   60

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Arg Thr Thr Gln Ser Ser Trp Gln
 65   70   75   80

Ile Leu Asn Lys Gly

58

<210> 122
<211> 20
<212> PRT
<213> Homo sapiens

<220>
<221> UNSURE
<222> (15)

<400> 122
Met Gly Gly Ala Trp Ser Ile Ala Gly Pro Leu Thr Gly Phe Xaa Phe
 1   5   10   15

Arg Leu Thr Phe
            20

<210> 123
<211> 103
<212> PRT
<213> Homo sapiens

<400> 123
Phe Tyr Phe Leu Phe Ser Phe Val Leu Arg Trp Ser Phe Thr Leu Val
 1   5   10   15

Thr Gln Ala Gly Val Gln Trp Cys Asp Leu Gly Ser Leu Gln Pro Pro
            20   25   30

Pro Pro Arg Leu Lys Ala Phe Ser Cys Leu Gly Leu Pro Ser Ser Trp
            35   40   45

Asp Tyr Arg His Ala Leu Gln Arg Pro Ala Asn Phe Ala Phe Leu Val
        50   55   60

Glu Ile Gly Phe His His Val Gly Gln Ala Gly Pro Gln Leu Leu Thr
 65   70   75   80

Ser Gly Asp Pro Ser Ile Leu Ala Ser Gln Ser Ala Gly Ile Thr Gly
                85   90   95

Val Thr Ala Val Pro Gly Pro
            100

<210> 124
<211> 48
<212> PRT
<213> Homo sapiens

<220>
<221> UNSURE
<222> (13)..(43)

<400> 124
Met Val Val Ile Gln Ala Xaa Glu Glu Glu Lys Thr Xaa Xaa Xaa Xaa
1   5   10   15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
            20   25   30

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ile Trp Lys Ile Cys
            35   40   45

<210> 125
<211> 95
<212> PRT
<213> Homo sapiens

<400> 125
Met Ser Ser Tyr Met Ile Asn Lys Phe Leu Pro Ile Lys Lys Val Lys
1   5   10   15

Ile Pro Gly His Lys Val Phe Ser Thr Asp Ile Met Phe Leu Lys Phe
            20   25   30

Val Ser Ile Ala Thr Leu Leu Arg Arg His Thr Asp Ile Ser Glu Asp
            35   40   45

Leu Arg Val Leu Gln Asn Thr Glu Lys Ile Ser Arg Arg Lys Gly Lys
        50   55   60

Gly Glu Thr Lys Lys Leu Lys Glu Gly Leu Thr Tyr Lys Trp Asn Asp
65   70   75   80

Leu Lys Arg Asn Gly Glu Pro Gly Glu Thr Gly Val Ser Gln Ser
                85   90   95

60

<210> 126
<211> 48
<212> PRT
<213> Homo sapiens

<400> 126
Met Ile Lys Tyr Phe Lys Ser Asn Asn Tyr Lys Phe Asn Tyr Tyr Lys
1   5   10   15

Thr Ser Ser Leu Thr Ser Asp Cys Phe Val Leu Ser Phe Lys Ile Ile
            20   25   30

Met Val Cys Leu Arg Val Cys Leu Leu Asn Thr Phe Ala Tyr Leu Pro
        35   40   45

<210> 127
<211> 98
<212> PRT
<213> Homo sapiens

<400> 127
Met Glu Phe Arg Ser Val Ala Gln Val Gly Val Gln Trp Arg Asp Leu
1   5   10   15

Gly Leu Leu Gln Pro Leu Pro Leu Gln Phe Lys Gln Phe Tyr Cys Leu
            20   25   30

Ser Leu Ser Ser Ser Trp Asp Tyr Arg His Ser Pro Pro His Pro Ala
            35   40   45

Asn Phe Leu Tyr Phe Ala Lys Ile Leu Tyr Ile Ala Lys Arg Phe His
        50   55   60

His Val Gly Gln Ala Gly Leu Ala Leu Leu Thr Ser Gly Asp Pro Pro
65   70   75   80

Thr Ser Ala Ser Gln Ser Ala Gly Ile Thr Gly Leu Ser His Cys Ala
            85   90   95

Gln Pro

<210> 128

<211> 50
<212> PRT
<213> Homo sapiens

<400> 128
Met Gly Lys Arg Arg Asp Ser Trp Thr Asn Arg Glu Arg Gln Leu Glu
1   5   10   15

Asn Lys Ser Met Gln Lys Ile Ile Tyr Asn Lys Ile Met His Leu Thr
                20   25   30

Leu Val Thr Lys Gln Ile Ser Tyr Pro His Phe Ser Leu Ser Val Phe
            35   40   45

Val Ser
    50

<210> 129
<211> 16
<212> PRT
<213> Homo sapiens

<400> 129
Met Leu Leu Phe Val Leu Ser Leu Val Phe Gln Tyr Gln Phe Asn Thr
1   5   10   15

<210> 130
<211> 54
<212> PRT
<213> Homo sapiens

<400> 130
Met Ala Leu His Cys Phe Thr Ser Gly Leu Trp Ile Ala Ser Val Arg
1   5   10   15

Lys Lys Val Lys Met Lys Glu Lys Val Glu Gln Ile Leu Ala Thr Glu
                20   25   30

Pro Pro Glu Asp Ser Cys Pro Phe Ser Asn Lys Leu Ser Gly Lys Cys
            35   40   45

Cys Cys His Gly Ser Thr
        50

<210> 131

62

<211> 41
<212> PRT
<213> Homo sapiens

<400> 131
Met Cys Ala His Lys Gly Lys Ala Met Arg Glu Arg Thr Gln Pro Glu
1   5   10   15

Gly Gly His Leu Ala Ser Gln Gly Glu Ala Leu Arg Glu Thr Lys Pro
            20   25   30

Ala Arg Leu Gly Thr Val Ala His Gly
            35   40

<210> 132
<211> 35
<212> PRT
<213> Homo sapiens

<400> 132
Met Ala Leu Ile Leu Leu Glu Ala Leu Cys Phe Gly Leu Ile Ile Cys
1   5   10   15

Met Asn Arg Glu Ser Ile Ser Thr Leu Ile Phe Tyr Lys His Trp Met
            20   25   30

Ser Ile Leu
        35

<210> 133
<211> 58
<212> PRT
<213> Homo sapiens

<400> 133
Met Phe Asn Ala Tyr Leu Leu Tyr Asn Asn Gln Val Ile Thr Val Gln
1   5   10   15

Ile Lys Gly Pro Lys Cys Phe Arg Tyr Asp Ile Ile Leu Ser Ile Val
            20   25   30

Asn Trp Thr Lys Glu Thr Leu Tyr Val Gln Gly Ser Val Glu Gln Pro
            35   40   45

Trp Cys Ser Trp Asp Met Leu Pro Arg Cys
        50   55

63

<210> 134
<211> 27
<212> PRT
<213> Homo sapiens

<400> 134
Met Met Lys Leu Cys Phe Thr Ala Ser Leu Leu His Gly Ala Leu Leu
 1   5   10   15

Trp His Leu Ala Thr Thr Asn Ser Leu Ile Pro
            20   25

<210> 135
<211> 46
<212> PRT
<213> Homo sapiens

<400> 135
Met Glu Leu Pro Ser Met Cys Pro Ile Leu Phe Phe Val Thr Val Phe
 1   5   10   15

Phe Met Tyr His Thr Pro Ser Cys Pro Ser Ser Val Pro Gln Thr His
            20   25   30

Gln Ser His Phe Leu Leu Thr Ala Leu Gly Leu Ala Leu Thr
         35   40   45

<210> 136
<211> 77
<212> PRT
<213> Homo sapiens

<400> 136
Met Thr Cys Pro Gly Gly Glu Thr Gly Trp Gly Cys Leu Arg Met Asp
 1   5   10   15

Pro Arg Glu Trp Val Ser Ser Pro Asp Gln Gln Asn Leu Arg Met Cys
            20   25   30

Ala Trp Ile Gln Pro His Leu Lys Leu Gly Leu His Phe Val Ser Gly
            35   40   45

Ala Pro Asn Ala Leu Cys Leu Gly Cys Leu Tyr Ser Trp His Thr Gly
         50   55   60

                                64

```
Glu Ala Leu Ser Pro Ala Gly Pro Gly Cys Cys Cys Ser
 65               70               75
```

<210> 137
<211> 37
<212> PRT
<213> Homo sapiens

<400> 137
```
Met Glu Gln Glu Ser Val Pro Ser Met Ser Leu Phe Thr Arg Ile Leu
 1               5               10                  15

Ser Gln Pro Ser Leu Phe Pro Trp Gln Ala Leu His Arg Glu Thr Gly
            20               25                  30

Lys Arg Ser Thr Val
         35
```

<210> 138
<211> 59
<212> PRT
<213> Homo sapiens

<400> 138
```
Met Leu Leu Pro Leu Pro Ala Ile Ser Phe Pro Cys Asn Ser Leu Phe
 1               5               10                  15

His Pro Ala Asp Ala Ser Ser Leu Ser Trp Leu Ser Ser Lys Ser Tyr
            20               25                  30

Pro Leu Gly Lys Leu Thr Arg Met Leu Gln Ser Asp Gly Val Ser Pro
            35               40               45

Pro Gly Pro Pro Gln Thr Leu Tyr Phe Leu Leu
     50               55
```

<210> 139
<211> 50
<212> PRT
<213> Homo sapiens

<400> 139
```
Met Asp Asn Lys Cys Leu Thr Leu Thr Asn Tyr Leu Ala Ile Met Gly
 1               5               10                  15
```

Phe Phe Asp Gln Lys Ser Ser Lys Arg Val Trp Trp Gly Leu Arg Asp
          20   25   30

Pro Ser Ser Leu Pro Lys Asn Met Lys Ser Phe His Phe Gln Tyr Val
          35   40   45

Lys Thr
     50

<210> 140
<211> 72
<212> PRT
<213> Homo sapiens

<400> 140
Met Arg Val Val Phe Lys Ile Thr Phe Cys Arg Val Val Cys Ser Thr
 1   5   10   15

Leu Met Leu Lys Gly Ser His Leu Pro Gln Pro Ile Lys Leu Cys Cys
          20   25   30

Leu Cys Ser Ala Phe Tyr His Lys Asn Met Thr Phe Lys His Lys Asn
          35   40   45

Thr Leu Tyr Ser Thr Thr Lys Asn Arg Asn Asp Ile Tyr Leu His Cys
     50   55   60

Phe Pro Ile Ser Leu His Leu Tyr
 65   70

<210> 141
<211> 863
<212> PRT
<213> Homo sapiens

<400> 141
Met Pro Glu Gln His Lys Asp Pro Arg Val Gln Glu Asn Pro Asp Asp
 1   5   10   15

Gln Arg Thr Val Pro Glu Val Thr Gly Asp Ala Arg Ser Ala Phe Trp
          20   25   30

Pro Leu Arg Asp Asn Gly Gly Pro Ser Pro Phe Val Pro Arg Pro Gly
          35   40   45

66

```
Pro Leu Gln Thr Asp Leu His Ala Gln Ser Ser Glu Ile Arg Tyr Asn
    50                  55                  60

His Thr Ser Gln Thr Ser Trp Thr Ser Ser Ser Thr Lys Arg Asn Ala
65                      70                  75                  80

Ile Ser Ser Ser Tyr Ser Ser Thr Gly Gly Leu Pro Gly Leu Lys Gln
                85                  90                  95

Arg Arg Gly Pro Ala Ser Ser Arg Cys Gln Leu Thr Leu Ser Tyr Ser
            100                 105                 110

Lys Thr Val Ser Glu Asp Arg Pro Gln Ala Val Ser Ser Gly His Thr
        115                 120                 125

Arg Cys Glu Lys Gly Ala Asp Thr Ser Pro Gly Gln Thr Ile Ala Pro
    130                 135                 140

Thr Gly Gly Ser Pro Arg Ser His Asp Ser Arg Pro Arg Arg Arg Lys
145                 150                 155                 160

Ile Pro Leu Leu Pro Arg Arg Arg Gly Glu Pro Leu Met Leu Pro Pro
            165                 170                 175

Pro Leu Glu Leu Gly Tyr Arg Val Thr Ala Glu Asp Leu His Leu Glu
            180                 185                 190

Lys Glu Thr Ala Phe Gln Arg Ile Asn Ser Ala Leu His Val Glu Asp
        195                 200                 205

Lys Ala Ile Pro Asp Cys Arg Pro Ser Arg Pro Ser His Thr Leu Ser
    210                 215                 220

Ser Leu Ala Thr Gly Ala Ser Gly Gly Pro Pro Val Ser Lys Ala Pro
225                 230                 235                 240

Thr Met Asp Ala Gln Gln Asp Arg Pro Lys Ser Gln Asp Cys Leu Gly
            245                 250                 255

Leu Val Ala Pro Leu Ala Ser Ala Ala Glu Val Pro Ala Thr Ala Pro
            260                 265                 270

Val Ser Gly Lys Lys His Arg Pro Pro Gly Pro Leu Phe Ser Ser Ser
        275                 280                 285

Asp Pro Leu Pro Ala Asn Ser Ser His Ser Arg Asp Ser Ala Gln Val
        290                 295                 300
```

Thr Ser Met Ile Pro Ala Pro Phe Thr Ala Ala Ser Arg Asp Ala Gly
305   310   315   320

Met Arg Arg Thr Arg Ser Ala Pro Ala Ala Ala Ala Ala Ala Pro Pro
            325   330   335

Pro Ser Thr Leu Asn Pro Thr Ser Gly Ser Leu Leu Asn Ala Val Asp
            340   345   350

Gly Gly Pro Ser His Phe Leu Ala Ser Ala Thr Ala Ala Ala Arg Ala
            355   360   365

Gln Arg Ser Glu Val Arg Tyr Asn Gln Arg Ser Gln Thr Ser Arg Thr
        370   375   380

Arg Ser Cys Leu Lys Arg Asn Ala Ser Ser Ser Ser His Ser Ser Thr
385   390   395   400

Glu Gly Leu Gln Glu Val Lys Arg Arg Arg Gly Pro Ala Ser Ser His
                405   410   415

Cys Gln Leu Ala His Ser Ser Ser Asn Thr Val Ser Glu Asp Gly Pro
            420   425   430

Gln Ala Val Ser Ser Gly His Arg Cys Glu Asn Lys Ala Gly Thr Ala
            435   440   445

Pro Gly Gln Thr Leu Ala Pro Arg Gly Gly Ser Pro Arg Ser Gln Ala
        450   455   460

Ser Arg Pro His Ile Asn Thr Ala Leu His Val Glu Asp Lys Ala Ile
465   470   475   480

Ser Asp Cys Arg Pro Ser Arg Pro Ser His Thr Leu Ser Ser Leu Ala
            485   490   495

Thr Gly Ala Ser Gly Gly Pro Pro Val Ser Lys Ala Pro Thr Met Asp
            500   505   510

Ala Gln Gln Asp Arg Pro Lys Ser Gln Asp Ser Leu Gly Leu Leu Ala
            515   520   525

Pro Leu Ala Ser Ala Ala Glu Val Pro Ser Thr Ala Pro Val Ser Gly
        530   535   540

Lys Lys His Arg Pro Pro Gly Pro Leu Phe Ser Ser Ser Asp Pro Leu
545   550   555   560

68

Pro Ala Thr Ser Tyr His Ser Arg Asp Thr Ala Gln Val Thr Ser Leu
                565   570   575

Ile Pro Ala Thr Phe Thr Ala Ala Ser Arg Asp Ala Gly Met Arg Arg
                580   585   590

Thr Arg Ser Ala Pro Ala Ala Ala Thr Ala Ala Pro Pro Pro Ser Thr
        595   600   605

Leu Asn Asn Thr Ser Gly Ser Leu Leu Asn Ala Val Asp Gly Gly Pro
        610   615   620

Ser His Phe Leu Ala Ser Ala Thr Ala Ala Ala Arg Ala Gln Arg Ser
625   630   635   640

Glu Val Arg Tyr Asn Gln Arg Ser Gln Thr Ser Arg Thr Arg Ser Cys
                645   650   655

Leu Lys Arg Asn Ala Ser Ser Ser Ser Ser Ser His Ser Ser Thr Glu
                660   665   670

Gly Leu Gln Glu Val Lys Arg Arg Arg Gly Pro Ala Ser Ser His Cys
        675   680   685

Gln Leu Ala His Ser Ser Ser Asn Thr Val Ser Glu Asp Gly Pro Gln
        690   695   700

Ala Val Ser Ser Gly His Arg Cys Glu Asn Lys Ala Gly Thr Ala Pro
705   710   715   720

Gly Gln Thr Leu Ala Pro Arg Gly Gly Ser Pro Arg Ser Gln Ala Ser
                725   730   735

Arg Pro His Ile Asn Ser Ala Leu His Val Glu Asp Lys Ala Ile Ser
                740   745   750

Asp Cys Arg Pro Ser Arg Pro Ser His Thr Leu Ser Ser Leu Ala Thr
        755   760   765

Gly Ala Ser Gly Gly Pro Pro Val Ser Lys Ala Pro Thr Met Asp Ala
        770   775   780

Gln Gln Asp Arg Pro Lys Ser Gln Asp Cys Leu Gly Leu Leu Ala Pro
785   790   795   800

Leu Ala Ser Ala Ala Glu Val Phe Ser Thr Ala Pro Val Ser Gly Lys
                805   810   815

69

Lys His Arg Pro Pro Gly Pro Leu Phe Ser Ser Ser Asp Pro Leu Pro
            820   825   830

Ala Thr Ser Ser His Ser Gly Asp Ser Ala Gln Asp Thr Ser Leu Ile
            835   840   845

Pro Ala Pro Phe Thr Pro Ala Ser Arg Asp Ala Gly Ile Arg Arg
        850   855   860

<210> 142
<211> 29
<212> PRT
<213> Homo sapiens

<400> 142
Met Ser Tyr Leu Ser Leu Leu Leu Ile Ser Ile Phe Met Val Cys Tyr
    1   5   10   15

Phe Lys Arg Asn Ser Phe Pro Ile Thr Ile Leu Phe Ser
                20   25

<210> 143
<211> 32
<212> PRT
<213> Homo sapiens

<400> 143
Met Pro Trp Pro Met Pro Ile Cys Thr Gly Thr Gln Gly Val Leu Thr
    1   5   10   15

His Arg Gln Gly Pro Pro Pro Ala Ala Val Gly Val Ser Pro His Thr
                20   25   30

<210> 144
<211> 29
<212> PRT
<213> Homo sapiens

<400> 144
Met Asn Ala Phe Leu Leu Glu Arg Met Thr Glu Ser Gln Ala Met Asp
    1   5   10   15

Ile Gln Thr Cys Ile Phe Gln Thr Leu Leu Glu Asn Lys
            20   25

<210> 145
<211> 48
<212> PRT
<213> Homo sapiens

<400> 145
Met Ile Val Thr Asn Thr Ile Leu Lys Phe Ile His Lys Lys Pro Thr
 1   5   10   15

Thr Ile Thr Pro Thr Lys Gln His Gly Ile Ile Phe Ser Val Pro Glu
            20   25   30

Ala Lys Val Arg Ala Leu Leu Cys Phe Leu Leu Arg Met Pro Ser Pro
            35   40   45

<210> 146
<211> 55
<212> PRT
<213> Homo sapiens

<400> 146
Gly Gln Ala Leu Trp Leu Met Pro Val Ile Pro Val Val Ala Lys Ala
 1   5   10   15

Glu Gly Lys Asp His Leu Arg Pro Gly Val Ala Asn Gln Pro Gly Gln
            20   25   30

His Ser Lys Thr Leu Phe Leu Gln Lys Lys Asn Phe Ala Lys Leu Ala
            35   40   45

Glu His Gly Gly Ala Cys Leu
        50   55

<210> 147
<211> 55
<212> PRT
<213> Homo sapiens

<400> 147

71

Met Ser Arg Phe Arg Ile Gln Thr Ser Glu Thr Ala Pro Ile Pro Leu
 1   5   10   15

Val Ser His Pro His Thr Pro Leu Ser Asn Asn Asn Asn Leu His Leu
            20   25   30

Gly Asn Val Cys Tyr Val Pro Gly His Thr Gly Ile Ile Ser Cys Thr
            35   40   45

Pro His Arg His Leu Ile Lys
     50   55

<210> 148
<211> 50
<212> PRT
<213> Homo sapiens

<400> 148
Met Gln Gly Leu His Leu Pro Gln Gly Leu Gly Thr Cys Tyr Ser Ile
 1   5   10   15

Cys Leu Gln Cys Leu Ser Pro His Gly Tyr Phe Phe Val Ala Val Gly
            20   25   30

Leu Ser Ser Asn Val Met Ser Pro Thr Ser Leu Pro Lys Ala Val Leu
            35   40   45

Pro Thr
     50

<210> 149
<211> 31
<212> PRT
<213> Homo sapiens

<400> 149
Met Leu Pro Val Asn Ile Ser His Pro Leu Ser Arg Gly Asn Pro Leu
 1   5   10   15

Leu Ser Ser Lys Phe Ser Lys Phe Phe Leu Ile Glu Phe Ser Gln
            20   25   30

<210> 150
<211> 36
<212> PRT

72

<213> Homo sapiens

<400> 150
Met Asp Tyr Ser Leu Ser Phe Asp Asn Tyr Thr Trp Gly Phe Gly Glu
 1   5   10   15

Pro Arg Ile Lys Val Gln Ser Phe Asn Asp Leu Leu Ala Pro Gly Leu
            20   25   30

Thr Gln Glu His
            35

<210> 151
<211> 85
<212> PRT
<213> Homo sapiens

<400> 151
Met Ile Arg Ser Lys Gly Thr Asn Phe Gln Ile Leu Ala Glu Leu Phe
 1   5   10   15

Lys Gly Met Asp Phe Leu Trp Leu Gln Leu Ala Arg Leu Phe Gln Lys
            20   25   30

Ala Cys Pro Trp Leu Thr Ala Cys Leu Ala Gln Phe Leu Arg Ser Pro
            35   40   45

Leu Val Met Glu Asn Arg Ala Asp Arg Ile Gln Met Ala Arg Phe His
    50   55   60

Arg Gly Gln Gly Gly Pro Gln Ser Ala Asn Gln Gly Arg Leu Arg Pro
 65   70   75   80

Glu Lys Gly Ile Ser
                85

<210> 152
<211> 73
<212> PRT
<213> Homo sapiens

<400> 152
Met Asp Arg Phe Leu Asn Ser Lys Ala Arg Arg Leu Gly Ser Cys Ser
 1   5   10   15

His Pro Ala Phe Tyr Leu Leu Cys Val Pro Asp Glu Asp Thr Ser Cys

73

Ser Thr Met Tyr Leu Pro Leu Lys Arg Arg Ala Asp Pro Asp Gln Leu
        35   40   45

Phe Ser Asp Leu Leu Gly Gly Thr Gln Arg Leu Trp Arg Leu Trp Pro
    50   55   60

Ser Leu Ala Ser Val Glu Ser Gly Leu
65   70

<210> 153
<211> 63
<212> PRT
<213> Homo sapiens

<400> 153
Met Gln Cys Thr Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1   5   10   15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
            20   25   30

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Lys Ile Lys Phe Gly
            35   40   45

Met Lys Gln Glu Leu Ser Trp Thr Ile Tyr Asn Leu Leu Arg Tyr
        50   55   60

<210> 154
<211> 46
<212> PRT
<213> Homo sapiens

<400> 154
Met Arg Cys Leu Leu Ala Asp Ser Ser Leu Gln Met Gln Pro Gly Asp
 1   5   10   15

Val Thr Leu Arg Leu Glu Ser Cys Gly Ser Asn Pro Arg Gln Arg Gln
            20   25   30

Leu His Gln Val Leu Val Trp Val Arg Asn Arg Gly Lys Gly
            35   40   45

<210> 155

74

<211> 72
<212> PRT
<213> Homo sapiens

<220>
<221> UNSURE
<222> (22)

<400> 155
```
Met Pro Pro Arg Gly Trp Ala Cys Pro Ser Ser Gly Pro Pro Ala Pro
 1               5                  10                  15

Gly Pro Gly Arg Trp Xaa Arg Ala Ala Ala Gly Gly Leu Arg Arg Thr
            20                  25                  30

Arg Cys Asp Trp Leu Pro Leu Arg Arg Thr Gln Met Ser Leu Arg Arg
            35                  40                  45

Ile Asp Leu Leu Pro Ser Pro Ala Gly Gln Ala Gln Ala Gly Ser Glu
        50                  55                  60

Asn Tyr Leu Pro Leu Phe Ile Ser
65                  70
```

<210> 156
<211> 20
<212> PRT
<213> Homo sapiens

<220>
<221> UNSURE
<222> (10)

<220>
<221> UNSURE
<222> (13)..(14)

<220>
<221> UNSURE
<222> (16)

<220>
<221> UNSURE
<222> (20)

<400> 156
```
Met Val Phe Ile Phe Ser Thr Thr Ile Xaa Phe Phe Xaa Xaa Glu Xaa
```

```
        1                5                    10                    15

Glu Ser Cys Xaa
              20



<210> 157
<211> 66
<212> PRT
<213> Homo sapiens

<400> 157
Met Ser Leu Thr Tyr Ser Trp Lys Lys Ser Lys Val Thr Lys Phe Asn
  1                5                    10                    15

Leu Ser Thr Leu Arg Met Thr Val Thr Asn Lys Asn Arg Thr Val Gln
              20                    25                    30

Lys Cys Ala Lys Asp Thr Arg Lys Leu Asn Asn Ile Asn Ser Met Ile
          35                    40                    45

Ile Val Ile Leu Tyr Thr Met Glu Ser Lys Gln Ile Phe Phe His Gly
      50                    55                    60

Asn Ser
 65



<210> 158
<211> 41
<212> PRT
<213> Homo sapiens

<400> 158
Met Met Thr Gly Glu Ala Arg Glu Ser Gln Ile Ala Leu Tyr Lys Gln
  1                5                    10                    15

Arg Phe Arg Glu Phe Arg Glu Glu Gly Arg Thr Ile Tyr Lys Gly Arg
              20                    25                    30

Trp Lys Arg Ser His Leu Ala Glu Gly
          35                    40



<210> 159
<211> 31
<212> PRT
<213> Homo sapiens
```

76

<220>
<221> UNSURE
<222> (7)

<400> 159
Met Leu Glu Leu Gly Leu Xaa Pro Lys Leu Thr Ser Glu Tyr Arg Phe
 1   5   10   15

Pro Pro Asn Cys Met Ile Leu His Ile Trp Ser Gln Leu Glu Val
             20   25   30

<210> 160
<211> 75
<212> PRT
<213> Homo sapiens

<400> 160
Met Tyr Ile Tyr Ile Cys His His Phe Lys Asn Gln Ala Phe Lys Val
 1   5   10   15

Lys Leu Ser Phe Pro His Ile Phe Phe His Ser Ile Phe Tyr Gln Tyr
             20   25   30

Arg His Ser Leu Leu Leu Leu Ser Phe Gln Phe Pro Ile Ile Ser Ser
             35   40   45

His Pro Ile Phe Cys Ala Ser Ser Val Phe Lys Thr His Ser Pro Ser
         50   55   60

Ala Ala Met Ala Pro Thr Ile Ile Phe Ile Thr
65   70   75

<210> 161
<211> 36
<212> PRT
<213> Homo sapiens

<220>
<221> UNSURE
<222> (7)..(13)

<400> 161
Met Lys Arg Gly Asn Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Thr Pro
 1   5   10   15

77

Cys Lys Asp Trp Ser His Thr Ala Met Ser Gln Glu Pro Pro Val Leu
          20   25   30

Val Arg Val Leu
          35

<210> 162
<211> 24
<212> PRT
<213> Homo sapiens

<220>
<221> UNSURE
<222> (9)

<220>
<221> UNSURE
<222> (20)

<400> 162
Met Trp Ala Ala Trp Arg Arg Arg Xaa Asn Gly Phe Phe Pro Arg Ile
 1   5   10   15

Pro Gly Lys Xaa Arg Gly Pro Asn
              20

<210> 163
<211> 31
<212> PRT
<213> Homo sapiens

<400> 163
Met Cys His Ser Leu Tyr Arg Phe Leu Asn Cys His Ser Arg Tyr Tyr
 1   5   10   15

Ile Val Tyr Thr Tyr Leu Thr Ile Phe Tyr Trp Cys His His Phe
              20   25   30

<210> 164
<211> 134
<212> PRT
<213> Homo sapiens

<220>
<221> UNSURE

<222> (2)..(22)

<220>
<221> UNSURE
<222> (39)..(67)

<220>
<221> UNSURE
<222> (79)..(113)

<400> 164
Met Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1   5   10   15

Xaa Xaa Xaa Xaa Xaa Xaa Ala Gly Lys Arg Glu Asn Gln Lys Asp Ser
            20   25   30

Ser Val Arg Arg Thr Trp Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
        35   40   45

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
    50   55   60

Xaa Xaa Xaa Arg Phe Ser Pro Arg Ala Tyr Arg Lys Lys Val Xaa Xaa
65   70   75   80

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
            85   90   95

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
            100   105   110

Xaa Arg His Asn Arg Lys Leu Ile His Leu Ser Ser Lys Phe Leu Ile
        115   120   125

Ile Asn Val Ile Ala Ser
        130

<210> 165
<211> 51
<212> PRT
<213> Homo sapiens

<400> 165
Met Ser Lys Val Asp Leu Phe Ile Thr Asp Ser Phe Lys Lys Phe Asn
1   5   10   15

Gln Tyr Leu Leu Ala Thr Tyr Ser Thr Ser Gly Thr Gln Gly Ile Trp
            20   25   30

Ser Thr Thr Met Lys Lys Arg Asp Trp Thr Leu Lys Glu His Arg Ser
            35   40   45

Cys His Phe
        50

<210> 166
<211> 60
<212> PRT
<213> Homo sapiens

<400> 166
Met Ser Asp Ser Arg Leu Cys Ser Cys Phe Leu His Thr Leu Ile Phe
 1   5   10   15

Leu Asn Ile Ser Lys Ile Gln Ser Gly Ser Lys Ile Thr Cys Lys Asn
            20   25   30

Ile Leu Ala Gln Glu Phe Asp Arg Leu Lys Ile Asn Tyr Leu Lys Tyr
            35   40   45

Ile Lys Gln Glu Val Tyr Leu Leu Tyr Ser Met Tyr
        50   55   60

<210> 167
<211> 15
<212> PRT
<213> Homo sapiens

<400> 167
Met Val Phe Gln Lys Thr Ser Leu Tyr Ser Asn Asn Ile Leu Leu
 1   5   10   15

<210> 168
<211> 106
<212> PRT
<213> Homo sapiens

<400> 168
Cys Pro Ala Ala Tyr Thr Val Phe Leu Thr Arg Ile Ile Val Lys Tyr
 1   5   10   15

80

Tyr Leu Asn Arg Gly Leu Phe Ser Glu Thr Pro Ser Asn Leu Lys Val
                20   25   30

Glu Glu Lys Gly Trp Val Trp Trp Leu Met Pro Val Thr Pro Ala Leu
                35   40   45

Trp Glu Ala Glu Ala Gly Gly Ser Leu Glu Leu Ser Leu Arg Pro Gly
        50   55   60

Trp Ala Thr Pro Ser Leu Pro Lys Asn Thr Lys Met Ser Gln Ala Trp
65   70   75   80

Trp Cys Thr Pro Val Val Pro Ala Ala Leu Gly Ala Glu Val Gly Gly
                85   90   95

Arg Leu Gly Pro Arg Arg Trp Arg Leu Gln
                100   105

<210> 169
<211> 19
<212> PRT
<213> Homo sapiens

<400> 169
Met Gly Pro Asp Arg Leu Lys Gln Lys Ser Asn Thr Ala Val Val Ser
    1   5   10   15

Arg Trp Ile

<210> 170
<211> 47
<212> PRT
<213> Homo sapiens

<220>
<221> UNSURE
<222> (3)..(4)

<220>
<221> UNSURE
<222> (13)

<220>
<221> UNSURE
<222> (16)

<400> 170

Met Asp Xaa Xaa Lys Trp Arg Met Arg Arg Gln Pro Xaa Ile Asn Xaa
1   5   10   15

Met Tyr Gln Thr Val Thr Ile Cys Glu Glu Tyr Cys Val Tyr Thr Asn
            20   25   30

Arg Lys Gln Leu Lys Ala Phe Asn Met Cys Gly Trp Gly Glu Arg
        35   40   45

<210> 171
<211> 197
<212> PRT
<213> Homo sapiens

<400> 171

Gln Glu Ala Gln Ile Met Lys Lys Leu Arg His Asp Lys Leu Val Pro
1   5   10   15

Leu Tyr Ala Val Val Ser Glu Glu Pro Ile Tyr Ile Val Thr Glu Phe
            20   25   30

Met Ser Lys Gly Ala Tyr Ser Leu Ser Ile Arg Asp Trp Asp Glu Ile
        35   40   45

Arg Gly Asp Asn Val Lys His Tyr Lys Ile Arg Lys Leu Asp Asn Gly
    50   55   60

Gly Tyr Tyr Ile Thr Thr Arg Ala Gln Phe Asp Thr Leu Gln Lys Leu
65   70   75   80

Val Lys His Tyr Thr Glu His Ala Asp Gly Leu Cys His Lys Leu Thr
            85   90   95

Thr Val Cys Pro Thr Val Lys Pro Gln Thr Gln Gly Leu Ala Lys Asp
            100   105   110

Ala Trp Glu Ile Pro Arg Glu Ser Leu Arg Leu Glu Val Lys Leu Gly
        115   120   125

Gln Gly Cys Phe Gly Glu Val Trp Met Gly Thr Trp Asn Gly Thr Thr
    130   135   140

Lys Val Ala Ile Lys Thr Leu Lys Pro Gly Thr Met Met Pro Glu Ala
145   150   155   160

82

Phe Leu Gln Glu Ala Gln Ile Met Lys Lys Leu Arg His Asp Lys Leu
                165   170   175

Val Pro Leu Tyr Ala Val Val Ser Glu Glu Pro Ile Tyr Ile Val Thr
                180   185   190

Glu Phe Met Ser Lys
            195

<210> 172
<211> 59
<212> PRT
<213> Homo sapiens

<220>
<221> UNSURE
<222> (28)..(49)

<400> 172
Met Cys Ile Met His Ile Asn Thr Phe Asn Leu Cys Asn His Leu Met
  1   5   10   15

Arg Trp Leu Leu Leu Lys Ser Pro Leu Cys Thr Xaa Xaa Xaa Xaa Xaa
                20   25   30

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
            35   40   45

Xaa Gln Lys Pro Lys Pro Thr Val His Gly Ile
    50   55

<210> 173
<211> 56
<212> PRT
<213> Homo sapiens

<220>
<221> UNSURE
<222> (14)..(21)

<400> 173
Met Lys Pro Ile Arg Gln Leu Val Pro Phe Thr Leu Glu Xaa Xaa Xaa
  1   5   10   15

Xaa Xaa Xaa Xaa Xaa Leu Tyr Leu Glu His Leu Thr Cys Arg Lys Arg
            20   25   30

83

Arg Gly Lys Thr Phe Leu Gly Lys Arg Lys Ala Val Ala Val Pro Lys
            35   40   45

Ser Lys His Phe Trp Gln Gly Phe
        50   55

<210> 174
<211> 104
<212> PRT
<213> Homo sapiens

<400> 174
Met Leu Lys His Leu Gln Val Leu Asp Leu His Gln Cys Ser Leu Thr
  1   5   10   15

Ala Asp Asp Val Met Ser Leu Thr Gln Val Ile Pro Leu Leu Ser Asn
            20   25   30

Leu Gln Glu Leu Asp Leu Ser Ala Asn Lys Lys Met Gly Ser Ser Ser
            35   40   45

Glu Asn Leu Leu Ser Arg Leu Arg Phe Leu Pro Ala Leu Lys Ser Leu
        50   55   60

Val Ile Asn Asn Cys Ala Leu Glu Ser Glu Thr Phe Thr Ala Leu Ala
 65   70   75   80

Glu Ala Ser Val His Leu Ser Ala Leu Glu Val Phe Asn Leu Ser Trp
                85   90   95

Glu Gln Val Cys Trp Trp Ala Thr
            100

<210> 175
<211> 490
<212> PRT
<213> Homo sapiens

<400> 175
Met Ser Gln Thr Arg Lys Lys Thr Ser Ser Glu Gly Glu Thr Lys Pro
  1   5   10   15

Gln Thr Ser Thr Val Asn Lys Phe Leu Arg Gly Ser Asn Ala Glu Ser
            20   25   30

84

```
Arg Lys Glu Asp Asn Asp Leu Lys Thr Ser Asp Ser Gln Pro Ser Asp
        35                  40                  45

Trp Ile Gln Lys Thr Ala Thr Ser Glu Thr Ala Lys Pro Leu Ser Ser
        50                  55                  60

Glu Met Glu Trp Arg Ser Ser Met Glu Lys Asn Glu His Phe Leu Gln
65                  70                  75                  80

Lys Leu Gly Lys Lys Ala Val Asn Lys Cys Leu Asp Leu Asn Asn Cys
                85                  90                  95

Gly Leu Thr Thr Ala Asp Met Lys Glu Met Gly Glu Ala Phe Glu Met
                100                 105                 110

Ile Pro Glu Leu Glu Glu Leu Asn Leu Ser Trp Asn Ser Lys Val Gly
        115                 120                 125

Gly Asn Leu Pro Leu Ile Leu Gln Lys Phe Gln Lys Gly Ser Lys Ile
        130                 135                 140

Gln Met Ile Glu Leu Val Ala Cys Ser Leu Thr Ser Glu Asp Gly Thr
145                 150                 155                 160

Phe Leu Gly Gln Leu Leu Pro Met Leu Gln Ser Leu Glu Val Leu Asp
                165                 170                 175

Leu Ser Ile Asn Arg Asp Ile Val Gly Ser Leu Asn Ser Ile Ala Gln
                180                 185                 190

Gly Leu Lys Ser Thr Ser Asn Leu Lys Val Leu Lys Leu His Ser Cys
        195                 200                 205

Gly Leu Ser Gln Lys Ser Val Lys Ile Leu Asp Ala Ala Phe Arg Tyr
        210                 215                 220

Leu Gly Glu Leu Arg Lys Leu Asp Leu Ser Cys Asn Lys Asp Leu Gly
225                 230                 235                 240

Gly Gly Phe Glu Asp Ser Pro Ala Gln Leu Val Met Leu Lys His Leu
                245                 250                 255

Gln Val Leu Asp Leu His Gln Cys Ser Leu Thr Ala Asp Asp Val Met
                260                 265                 270

Ser Leu Thr Gln Val Ile Pro Leu Leu Ser Asn Leu Gln Glu Leu Asp
        275                 280                 285
```

85

Leu Ser Ala Asn Lys Lys Met Gly Ser Ser Ser Glu Asn Leu Leu Ser
    290   295   300

Arg Leu Arg Phe Leu Pro Ala Leu Lys Ser Leu Val Ile Asn Asn Cys
305   310   315   320

Ala Leu Glu Ser Glu Thr Phe Thr Ala Leu Ala Glu Ala Ser Val His
                325   330   335

Leu Ser Ala Leu Glu Val Phe Asn Leu Ser Trp Asn Lys Cys Val Gly
                340   345   350

Gly Asn Leu Lys Leu Leu Leu Glu Thr Leu Lys Leu Ser Met Ser Leu
                355   360   365

Gln Val Leu Arg Leu Ser Ser Cys Ser Leu Val Thr Glu Asp Val Ala
    370   375   380

Leu Leu Ala Ser Val Ile Gln Thr Gly His Leu Ala Lys Leu Gln Lys
385   390   395   400

Leu Asp Leu Ser Tyr Asn Asp Ser Ile Cys Asp Ala Gly Trp Thr Met
                405   410   415

Phe Cys Gln Asn Val Arg Phe Leu Lys Glu Leu Ile Glu Leu Asp Ile
                420   425   430

Ser Leu Arg Pro Ser Asn Phe Arg Asp Cys Gly Gln Trp Phe Arg His
    435   440   445

Leu Leu Tyr Ala Val Thr Lys Leu Pro Gln Ile Thr Glu Ile Gly Met
    450   455   460

Lys Arg Trp Ile Leu Pro Ala Ser Gln Glu Glu Glu Leu Glu Cys Phe
465   470   475   480

Asp Gln Asp Lys Lys Lys Lys His Ser Leu
                485   490

<210> 176
<211> 136
<212> PRT
<213> Homo sapiens

<400> 176
Met His Leu Leu Ser Asp Gly Lys Glu Gly Ser Thr Tyr Lys Pro Phe
 1   5   10   15

86

Gln Glu Ile Ser Ser Ser Ser Lys Ser Gly Arg Lys Gly Ser Lys Ala
            20   25   30

Thr Ile Ser Phe Met Ser Ala Val Val Asn Pro Gln Leu Phe Lys Ser
            35   40   45

Arg His Leu Leu Thr Ala Phe Leu Pro Ser Phe Cys Arg Lys Cys Ser
        50   55   60

Phe Phe Ser Ile Leu Asp Leu His Ser Ile Ser Glu Leu Arg Gly Leu
65   70   75   80

Ala Val Ser Glu Val Ala Val Phe Cys Ile Gln Ser Leu Gly Trp Glu
                85   90   95

Ser Leu Val Leu Arg Ser Leu Ser Ser Phe Leu Leu Ser Ala Leu Glu
            100   105   110

Pro Leu Arg Asn Leu Leu Thr Val Glu Val Trp Gly Leu Val Ser Pro
            115   120   125

Ser Glu Glu Val Phe Phe Leu Val
    130   135